The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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Royal School of Mines.

PROF. SMYTH'S LECTURES ON MINING—No. XIV.

[BY OUR SPECIAL REPORTER.]

In the last lecture we examined some of the circumstances under which bore-holes were employed, and into some of those cases in which borings might with advantage be used more frequently than they are. In the present lecture we have to examine the operation of boring when it has become of a more difficult character than before. The ingenuity, great experience, and considerable outlay which are necessary to meet these difficulties have rendered this branch of engineering of such a character that those who have steadily practised this kind of work for a great number of years will be far better guides than other engineers with a far greater amount of general education. If we look at a few of the most remarkable works of this kind, we have in this country the bore-holes now sinking at Battle, in Sussex, for scientific purposes, which has reached a depth of over 1800 feet. Then there is the bore-hole for the well of Grenelle, in France, which was put down to a little over 1800 feet: the sinking of this was watched with great interest by the French Institute, inasmuch as it was effected at a time when the whole matter of boring in connection with these deep wells was in a condition of uncertainty. Again, there are the deep bore-holes at St. Louis and Louisville, in America, and the one at Mondorff, in Westphalia, the latter being over 2200 feet. That of Creusot, in France, was the first to exceed 3000 feet, and was put down with the hopes of finding coal, inasmuch as it had been suggested from a consideration of the nature and position of the rocks in the locality that it was present underneath. This last was one of the cases I had in mind when I spoke previously of the careful and scientific way in which some of these continental borings have been carried out. A thermometer was let down at certain intervals after work had ceased, in order to ascertain the temperature of the rocks, and samples of the rocks passed through were carefully collected and preserved. One is only sorry to relate that such an undertaking was a failure, so far as its main object was concerned: the coal measures were pierced, but no coal found, and ultimately, from several causes of difficulty, the work was abandoned. Since that time a bore-hole deeper still has been sunk at Sperenberg, near Berlin, in a hill of gypsum; this had a diameter of 14 to 15 inches, and was successfully carried to a depth 4051 feet: it is the deepest hole yet made into the crust of the earth.

As the depth of the bore-hole increases a number of difficulties arise. There is the accumulating weight of the rods, and this with the iron rods referred to above, about 1 inch square, would amount to 1 ton for a depth of 100 fathoms: this weight, of course, will be proportionally increased when you have, as at Sperenberg, the rods 1¼ inch square. When you get to a depth of 600 to 1000 feet it is desirable to introduce some arrangement which will allow of steam power being employed to work the apparatus. Not only the weight of these long rods suggests a difficulty, but also the vibrations that are set up by the concussion; and these vibrations are injurious in two ways—firstly the effect they have in loosening the joints, and secondly by the fact that they tend to destroy to a great extent the cohesion of the fibres of even the best iron. Moreover, the striking of the vibrating rods against the sides of the bore-hole is apt to injure those sides, and thus to accumulate a mass of broken material above the tool; and this sometimes leads to rupture when it is attempted to withdraw the apparatus. Several methods have been proposed for obviating some of these difficulties, amongst others I may mention the patent of Mr. Paton, in Scotland. There may be a great deal of information on the subject to be obtained from the works of eminent borers, as, for example, that of Mr. Kind in German, and of Dégousée and Lourent in French. When the borings attain such great depth there are several means of raising the apparatus. One method is as follows—the rods may be suspended from the short arm of a lever in the form of a great beam, the longer arm of which is connected by a chain or rod of iron with a point near the middle of a second beam: one end of the latter is fixed, and the other is depressed at intervals by large teeth set on a windlass, turned, either by manual power or by a steam-engine. A large framework, or shears, frequently one of the ordinary triangular form, is erected, and other windlasses are used for withdrawing the rods. In performing the latter operation the rods are raised to a certain height, and then a pair of nippers, or other similar arrangement, above the hole holds them just under a joint, until the upper portion is unscrewed, or, if the rods are being put pown, until another is screwed on. It will readily be understood that a great amount of time is spent in this screwing and unscrewing of the rods, especially if it be in small lengths. A saving of time in this item may be effected by employing longer rods; or, in another way, by having a tall frame (as much as 90 feet in the Prussian bore-hole), so that more than one can be unscrewed at a time. In districts where the seasons are severe it may be necessary to house this framework, &c., in, and thus a conspicuous object to the North of Paris is the wooden tower over the boring apparatus at La Chapelle. This bore-hole is of great interest in many respects, and especially for its size: it was commenced with a diameter of 6 feet, and when the lecturer last saw it, just before the great war, it was still 5 feet. Its object, like that of the well at Grenelle, is to sink to the water-bearing beds below the chalk.

When the rods, by means of the vibration, strike against the sides of a bore-hole, not only do they injure it, but the friction holds the rods back, and prevents the falling apparatus from acquiring the velocity which it otherwise would, and, therefore, from doing all the work which it ought to do. Hence in a very early period in the history of these deep bore-holes it was suggested on the one hand to lighten the weight of the rods by some means, and on the other to liberate the cutting tool in some way from the great weight of the whole of the rods when making its blow. Among the first means suggested was that of using hollow instead solid rods, and amongst those who worked most successfully in this department was Von Oynhausen. He obtained very great success with the hollow rod in the boring carried out in Westphalia to a depth of 2220 feet; the difference in the weight between solid rods and hollow ones would be, of course, very considerable It was found that with them a greater number of strokes, as well as longer ones, could be made in a given time; and that in a certain kind of rock the mean rate of advance was 10¼ inches in 12 hours, when before it was only 7 or 8 inches. Another plan, adopted largely by the Americans, and to some extent by the Germans, is to use wooden instead of iron rods; these were floated up more or less by the water in the deep bore-holes, and thus a great part of the excessive weight was relieved, and a very satisfactory result was obtained. The rods were from 30 to 36 feet long, tapered toward each extremity; a piece of wrought-iron was fixed to each end, by means of plates or bolts, in order to cary the screw by which the rods were screwed together.

The next suggestion was to relieve the boring tool of the inefficiciency due to the friction and vibration of the rods attached above: letting fall only the boring tool, and so much of the other apparatus as is necessary to render it heavy enough to do its work. If then you have a boring tool sufficiently heavy, of course it will be desirable to raise it with an apparatus of the least possible weight. Kind, therefore, proposed that a very light upper rod should be employed for the purpose of raising the 30 or 40 feet of heavy rod attached to the cutting tool, but this cannot be carried out beyond a certain point; you cannot reduce the thickness of the rod below a certain size. A certain officer in the Prussian Engineers, and a mining official, of the name of Fabier, proposed a falling piece, which could be worked by being actually dropped from the remainder of the rods at a certain point, and could again be lifted by something in the shape of nippers. This has been called the free falling cutter. One form of this is constructed in the following manner: at the end of the main rod is a cylinder of much larger diameter, in the sides of which are four vertical slots, each with a small prolongation sideways at the top. The top of the tool is formed as a cross piece, the arms of which move freely in the slots, and will also lodge in the side prolongation of the slots. It is lifted up in the latter position to a height less than that of the slot, and then a small jerk of the rods by the master borer dislodges the tool, and it falls. It is lifted up again by lowering the cylinder, so that on turning it round it would catch the cross pieces in the side slots. (Fig. 16 shows roughly the principle, though not the proportions of

Fig. 16.

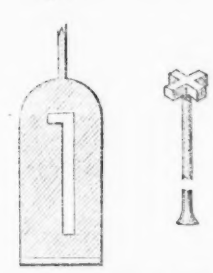
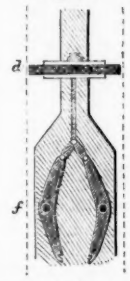


Fig. 17.



the arrangement.) Another method consists in having a pair of bent levers, hanging somewhat like pincers, which grasp the tool and raise it. Moveable on the upper part of the apparatus is a disk of leather, fitting closely round the bore-hole, so that when the instrument is being raised through the water the effect is a pressure on the upper surface of the disk, which tends to depress it relatively to the rest. By means of a collar a set of levers, or other structure connected with the disk, it acts upon the pincers so as to open them and release the tool. (The principle of one form of this arrangement is represented in Fig. 17, where *d* is the disk, and *f* the fixed point of the levers.) It may be objected that water is not always present to work these disks, but in these deep bore-holes it is rarely absent. So, partly to meet this objection, and partly to evade Kind's patent, another instrument was introduced, in which the concussion from the blow given by the heavy beam of a steam-engine was made to release the cutter. This method so injured the bore-holes, the concussion being transmitted through the ground, that it was soon given up. Then a second and far more successful method was introduced by Dégousée, which dispensed with the disk in Kind's method. A heavy rod of iron, hanging down by the side of the cutter, and attached to a collar above, which would serve the same purpose as the disk in the water—*viz.*, act on the pincers which held them. With apparatus af this kind a great many strokes can be given in a minute, with great reliance and precision. The lecturer said he was much struck when he saw this last apparatus at work by the manner in which you could feel the release of the boring tool, even at the depth of 600 to 700 feet, and by the satisfactory manner in which the work was performed, so as to leave no doubt of its being an excellent plan. Occasionally small pieces are added in parts outside of the rods, for the purpose of guiding the tool, and these may carry additional cutters, to aid in keeping the bore-hole as true as possible, and to preserve it vertical throughout, the latter being a point of great importance.

The next consideration is to obtain satisfactory samples of the material cut through. The old plan of boring was to chip the whole up to pieces, even into slime, so that it was necessary to look very closely to see if a black spot was a piece of coal or not, and hence arose many mistakes. But a great improvement on this method was suggested long ago—that of putting down a cylindrical tool, and cutting away the rock round the circumference, so as to leave a central core. Then a second tool is employed, in which, by means of a string, a tooth is detached, which cuts away a great part of the foundation of this core, so as to weaken it. That is withdrawn, and a third tool introduced, with clamp worked by a spring or gravity, so as to catch hold of the core, which is then drawn away in a lump. Pieces may be very conveniently detached in this way 1 foot in length, and are very important for several reasons. You may see accurately what kind of rock it is you are working in, and, as in the case of the scientific boring at Battle, you may bring up bodily some of the rock containing fossils, so that you can determine not only the texture and nature of the rock, but also to form some conclusion as to its geological position. And a third advantage is that you may by this means frequently get a clue to the stratification of the rock, but very great precaution is necessary here; the rods must be drawn up steadily, and carefully watched, to see they do not alter their position. If the core brought up shows distinct lines of stratification, or if it shows the junction of the bed with one above or below, you will be able to come to some conclusion as to the direction of the dip and strike of the beds. And it is quite possible that information so obtained would help you to determine in what part you should sink your pit, so as to come on the seams. In the large bore-hole of La Chapelle cores of chalk have been brought up as much as 3 feet in diameter, and 5 to 6 feet long, and set round the workings as trophies. The lecturer advised any of his hearers who might happen to be in that neighbourhood not to omit going to see these trophies of boring art.

UNDERGROUND HAULAGE.

Paper read before the South Staffordshire Institute of Mining Engineers, Jan. 31.

BY MR. H. M. MORRISON, MANCHESTER.

One of the important questions engaging the attention of the colliery managers at the present day is the cheap conveyance of coals from the working faces of the mine. To the outlet shaft a great deal has been done of late years in this direction, but a great deal more yet remains to be done, and I believe an adequate reward will follow any satisfactory improvements in this direction. I do not think it necessary to introduce a practical paper with a long theoretical preface, but will proceed at once to bring before you for your practical consideration the merits of a system having many features of interest—viz., the adaptation of the endless rope. There are three systems at present working in the English collieries, and known as—1. The Tail Rope System.—2 The Endless Rope System.—3. The Endless Chain System. Each of the systems have strong advocates, and can be made capable of performing cheap and satisfactory work under the different conditions to which they are severally applicable. The chief merit of the tail rope system is that it can be worked by single roads, and along any number of branches, and is capable of removing large quantities of material at a reasonable cost. The endless rope and the endless chain require double roads, and either of these latter systems properly laid out are capable of bringing to the pit bottom a very large daily output at a minimum of cost. In adopting the endless rope system there are many important points in its favour, which I think will tend to bring it into very general use, always supposing the roof of the mine, floor, and other contingent circumstances will allow the laying and keeping open, and in working order, a good double road, it can easily be adopted to an undulating road, it does not necessitate straight roads, and it can be arranged to work any number of branches; it also requires less motive power then the tail rope system to perform an equal or larger amount of work. The engine also may be placed in any suitable position, either at surface or below ground; the rope in this case is continually running as an endless band, travelling at a pace averaging from 1½ to 4 or 5 miles per hour, and very rarely requires to be stopped during the working of the pit. The tubes may be worked singly, as with the endless chain, or they may be run in setts as with the tail rope.

Where the tubs are run singly there are several modes of securing them to the moving rope, but depending upon the position of the latter, whether it is chained above the tubs or running underneath, there are many exemplifications of the different forms of attachments to be found in the collieries in the Wigan district, where the rope generally runs above the tubs, at a pace of about 1¼ to 1½ miles per hour. The tubs are run singly or in short setts of two or three coupled together, as in the endless chain arrangements, at stated distances apart, both on the full and empty roads; the mode of attachment between the tubs and moving rope is effected by two short lashing chains, 6 ft. long, and of ⅝-in. or ½-in. chain. Each chain has a hook at each end; the fore end of the tub is first secured as follows—one hook fastens into the ring at the end of the draw-bar of the tub; a lad then throws the other end of the lashing chain over the moving rope, takes a turn and a-half round, and then brings the chain into the jaw of the hook, when it fastens itself. The tub or short sett is secured at both ends, so as to prevent fouling or loosing the lashing chain when going down a bank. The lashing is rapidly performed, usually taking about 10 seconds. Another plan in use is to lash strong loops of hemp cordage around the rope, leaving a loop into the centre of the wrapping, into which the hook of the lashing chain is simply dropped.

A third system, and one that is used in the North, is by fixing a curved bar in front of the tub, which tightens itself round the diameter of the rope. This curved bar works loose in sockets placed at each end of the tub, and is disconnected from the tub as soon as it arrives at the end of the rope movement. A later system, which may be new to many present, is one that was invented about two years ago by an Austrian engineer, and which has been successfully adopted in that country. Messrs. Scott, Bros., the wire rope manufacturers, of Manchester, have the right of working it in this country, and will shortly introduce it. The mode is as follows:—It consists in applying and screwing to the moving rope a fixed projection or knot at fixed distances, but sufficiently apart from each other, so that no two knots may be wound at one time over the rim of the driving drum—10 yards is a most suitable average distance. The knots may be composed of the wire itself, or of a conical metal bush, or of prepared metal, which may be affixed by a suitable mould. The fixture of these knots on the moving rope is such that when any of them comes in contact with the projecting claw of a carriage in their line of route the said knot will be sufficiently rigid, and large enough to impel such carriage forward with the rope, and still be enabled to pass between the groves of the corner pulleys. At the terminus the rope is arranged to pass beneath a platform in the line, thus releasing the carriage or tub without any stoppage in the transit of the rope.

We will start at the driving pulley, which we will assume is running. The rope, which is of steel, consists of five solid strands of wire, seven wires to each strand; the strands are twisted around a hemp centre. The rope is 2½ in. in circumference, and the total length required for this seam at present is 6000 yards. The rope comes in on the high side of the pulley, and performs 2¼ revolutions around the drum and comes out on the bottom side. It passes through a cast metal pipe underneath the plates at the loading-flat in the pit bottom, and comes out at the first carrying roller; there is a flat here about 20 yards in length used for hooking up the empty tubs and making up the train. We shall arrange a train of empties here. The train consists generally of 15 tubs; in the front of the train is placed a bogie, which is in reality a small tub, with a seat at each end for the rider who has the charge of this empty sett. The riders are generally lads, with a wage of about 2s. 6d. daily. In the bogie is fixed a pair of grippers (a patent of my own); it is really a pair of tongs made of steel, opened and shut by means of a shaft, in which is cut a right and left hand thread. This works in two swing nuts; and is turned by a handle. When not engaged it just clears the carrying rollers. The connection with the rope is made by the boy in the bogie, who, by means of a short hook, lifts the rope about 3 in. into the jaw of the gripper (a couple of turns of the handle with the right hand enables it effectually to grip the rope), and the train at once is put in motion. The action of the gripper is so powerful that it will take its load down any inclination and not exceed the speed of the rope. The mouth of the jaw is also so arranged that it forms a perfect grip circle all around the rope, thus effectually preventing injury to the rope. It also rests upon an axle in the centre of the bogie, and moves across it transversely so as to accommodate itself to the narrow curves on the road, around which it works with the most perfect smoothness. In front of the bogie is a powerful lamp, which throws its light some distance ahead of the train, and the rider sitting in his bogie with his hand upon the handle of the grippers is capable of detaching his train from the rope in half a second in case of danger being seen ahead, or in case of any of his tubs being thrown off the lines. The road has a gauge of 2 ft. 9 in.; the rails are ordinary cast metal angle rails in 3 ft. lengths. Having taken our seats with the train rider in the bogie, the connection is made with the moving rope, and the train commences its onward journey. We travel quickly along until we arrive at about 30 yards of a sharp curve; the rope is here kept in the centre of the road by means of a cast metal guide called a bonnet pulley. These are placed about 4 ft. to 5 ft. apart, and in going around the curve the jaw part of the gripper is swung on one side, and just fits in the groove of the bonnet-pulley; immediately it has passed the moving rope takes its place in the pulley-groove, and the movement of the rope is maintained intact in its proper position. The weight of these bonnet pulleys with their base plates are about 100 lbs. each, and are screwed down upon the ordinary road sleeper. Having safely passed the curve we arrive where the train is detached; when at about 5 yards outbye the rope passes below the road. At the corner of the level there are two 5-ft. pulleys placed below the ground, the rope passing around the first outbye pulley comes out in the road again about 10 yards along the level, and is carried on pulleys as before, where there is a 5 ft. pulley placed below the road. The rope passing around this is brought in carrying pulleys along the side of the road until it returns again, when it passes around the inbye 5 ft. pulley, and comes out in the road again about 10 yards. The road to only a single one, so that only one train can be passed along this road either way during the journey.

Returning to the main line, where we left the train detached from the rope, a short distance out by the station, the rope here being lost sight of, and coming out as before explained, a short distance inbye. To enable the train to arrive at the proper position to be again attached to the rope it is necessary to so arrange the road that the train may run by gravity between the two points, or in case of this being not feasible a length of chain is used, one end of which is lashed to a moving rope, and the other end to the train, which is thus moved over the vacant space to position where the rope can again be picked up, and caught by the grippers. We now move on until we come to a position where the rope is again carried below, the rope passing around the outer pulley, then around a wheel fixed on a carriage back around the inner corner pulley, and again making its appearance on the main road. The liability of the rope to stretch, and ring subject to very unequal strains, according as the movement of the trains as fast or slow necessitates the back balance arrangement. The moveable carriage carrying the pulley is secured to a chair, which passes over a small frame, having a lot of weights attached thereto, by which means the tension on the rope is kept uniform, and the grip necessary, in the first instance, on the driving pulley is never taken off, about 16 to 18 cwts. is sufficient to keep the rope taut.

Again taking our seats we grip the rope and move on to the terminus of this road, when there is again a return wheel placed below the road, around which wheel the rope passes, and returns on the outcoming lines, on which is a train of coals ready for transit. The bogie is run in front of this train, and being connected thereto, and again attached to the rope, commences its outward journey, having to detach. This portion, as before described, it passes over by gravity, when the gripper again meets the rope, and the train is then taken without another break to the pit bottom. We find the missing rope after passing around the corner pulleys carried along on pulleys as before, returning on the outcoming road, and then out, and again passing over the driving pulley, thus completing its circuit as an endless band. The number of trains in motion at one time vary from 12 to 20, sometimes 6, 8, or 10 trains convey out, being attached to the rope at different points, and the same number of empty trains moving inward. You will, therefore, see that the quantity brought to the shaft outlet is continuous, not confined to any quantity, and capable of removing the coals of a large number of workers. The two extra driving pulleys are for supplying power to two lower seams at the respective depths of 130 and 143 fathoms, the ropes in either of these cases being carried down the downcast shaft.

Cost.—The cost of this system depends in a great measure on the quantity capable of being daily lifted up the working shafts; but, taking, as in this case, the daily output at 500 tons, the figures will be as follows:—12 main riders, at 2s. 6d. per day, 1*l.* 10s.; coal to boiler, &c., 12s. 6d.; engine tenter, 6s.; stoker, 3s. 6d.; interest on original outlay, at 5 pecent., 7s.; ropes, even and bar, and depreciation, 3s.; oil, tallow, &c., 3s.; total, 3*l.* 5s = 1½d. per ton. I propose continuing this paper at our next meeting, furnishing you with indicating diagrams, showing power exerted through strains on ropes, &c.; but trust that in the meantime sufficient information has been furnished to show the adaptability of the systems to carry out the work claimed.

AMERICAN METALLURGICAL INDUSTRY—THE CENTENNIAL EXPOSITION.

From the enormous amount of sound practical information to be gained at the forthcoming Centennial Exposition, there can be little doubt that most European engineers and metallurgists possessing the means and opportunity of visiting Philadelphia will have a care to be present during some part of the time that the buildings are open. With a view to secure to such visitors the utmost possible convenience and enjoyment, the AMERICAN INSTITUTE OF ENGINEERS OF MINES have organised what may be designated an international technological club, and to those for whom it is intended they generously offer the privileges of membership without entrance fee or subscription. The nature of the arrangements will be readily understood from the subjoined letter which Professor Egleston has addressed to the President of the Iron and Steel Institute of Great Britain, and of which we have been favoured with an advance copy:—

School of Mines, Columbia College, New York, Jan. 19.

DEAR SIR,—The Committee of the American Institute of Engineers of Mines having in charge the reception of foreign mining engineers and metallurgists coming to this country to visit the Centennial Exposition, have perfected their arrangements, and have secured rooms at 1123, Girard-street, Philadelphia, which will be open to the guests and members of the Institute from April 1 to Dec. 1, 1876. These rooms will be in charge of a secretary of the committee and employees, and will be furnished with all the technical periodicals, with conveniences for writing, and parlours for meeting and conversation. An address book will be kept by the secretary for recording the names and addresses of the members of the Institute and of foreign engineers and metallurgists who come to the exposition. All members of the profession coming, introduced to the Institute or its members, will receive a card, which will entitle them to all the privileges of the rooms, and to attend and take part in the meetings of the Institute.

The annual meeting, which usually takes place in May, has been adjourned to the last of June, in order that may have the pleasure of having the largest possible number of foreign engineers present. It will be held in the Jury Pavilion of the Exposition.

The committee propose to give conveniences at the rooms for the storage and forwarding of baggage, specimens, and packages which their guests may have collected in any part of the country, and desire to have kept in a safe place until they are ready to take charge of them. They also propose to prepare schedules of information relating to the leading mining and metallurgical industries of the country. In case anyone should desire to pursue a special line of enquiry, the secretary or the members of the committee will take great pleasure in forwarding such investigation. It is designed also for those members of the profession who have but a short time to remain, to group for survey the special objects which they may have an interest in studying in the Exposition. The secretary is instructed to furnish to those who desire to make the acquaintance of specialists in this country letters of introduction, which will secure for them, not only admission to the works which they desire to visit, but also the acquaintance of technical gentlemen in all parts of the country. We hope in this way to furnish to our foreign guests, not only special information, but also to put them in the way of getting at a general survey of the whole of the mining and metallurgical industries of the United States.

The Institute will be greatly obliged to you if you will make these statements known, as far as it is in your power, to the mining and metallurgical engineers of your country, and we shall be pleased to have you personally give letters of introduction to us to any of your distinguished countrymen who may desire special information.

The members of the committee are Messrs. Eckley B. Coxe, J. S. Alexander, Dr. Thomas Egleston, and Dr. R. W. Raymond. THOS. EGLESTON.

ROTARY ENGINES.—Some improvements in rotary pumps and engines have been invented by Mr. R. PATRICK, jun., of Branchton, Waterloo, Canada. His invention has relation more particularly to improvements in that class of rotary pumps and engines in which a single cylinder or disc revolves within a cylindrical chamber, and it consists of a cylinder or disc of suitable dimensions mounted on a revolving shaft, and provided with a number of sliding blades placed parallel with its axis, which blades acting in combination with certain peculiarly placed cams projecting from the inner faces of the sides of the disc enclosement produce as the disc revolves a perfect or partial vacuum in the chambers or cells between the blades. Into these chambers the gas or fluid to be pumped is forced

by a well-known law of Nature through suitably arranged passages, and as the disc revolves the fluid or gas is forced forward by the blades and discharged through other passages in a continuous stream with great force.

MINING AND STOCK EXCHANGE NEWS OF THE WEEK.

Messrs. F. W. MANSELL and Co. (Sworn Stock and Share Brokers), Pinner's Hall, Old Broad-street, write to us as follows:—

"MARKET" RUMOURS.—Beware of them! They are always misleading because absolutely untrue—if favourable, greatly exaggerated; if unfavourable, a "mountain in labour." Obviously must this be the case so long as they emanate from such shady sources. If not, in the first instance, set on foot by the most inexperienced, whose judgment upon the prospects of a mine is of about the same value as would be their opinion upon the government of some stellar dynasty, the damaging rumour is floated into circulation by those who having sold shares unhesitatingly resort to any means enabling them to purchase at lower quotations. Even this proceeding, dishonourable enough, is respectable contrasted with the machinations of those who for their own purposes decry every mine other than that in which they have a direct and immediate interest. True, their own unhappy experience could lead them to no other conclusion than that mines are meritless. Some of these modern Jeremiahs croaked the same about Van—that was only a "flatting" to be unbottomed in the next level, yet its shareholders have received 16*l.* 13*s.* 6*d.* per 4*l.* 5*s.* share (selling in the market at 37*l.*) Great Laxey we were told years ago had paid its final dividend, and its prosperous days had for ever passed, yet Great Laxey has continued to pay its dividends, and there is certainly no evidence of waning prosperity—it has paid 19*l.* 3*s.* per 4*l.* share (selling at 17*l.*) Tankerville, these wiseacres told us, had but a pipe-vein, with only a short run of ground, and that at the best it was, as indicated by its former name, an "oven pipe," not worth the inset price at which it had been purchased, yet Tankerville has already returned to its shareholders in dividends 4*l.* 2*s.* per 6*l.* share (selling at 13*l.*), and the mine now in a better condition for returning lead than at any previous period, more valuable in point of productiveness, and more assured in its remunerative stability. Roman Gravels, too, did not escape adverse "market" rumours; those who should know better pointed at it as an exhausted mine that might possibly do something at an increased depth, yet its shareholders have received in dividends 5*l.* 16*s.* per 7*l.* 10*s.* share (selling at 14½*l.*) There are those who pretend to see no value whatever in any mine with which they are not in some way connected; retrospecting their own personal career this idiosyncracy is the more remarkable, since the many so-called mines associated with their names, first as vendors and promoters and then as secretaries, have not in a single instance paid one penny-piece in dividends—for years have the lodes been profusely spotted with heavy calls, and the mines are now *in articulo mortis*. Strange, indeed, is it that the investing public can be cajoled by such as these. Let shareholders in mines use common sense; this will be found a much more truthful guide than many who unblushingly pretend to possess knowledge they have not the means to obtain. Let shareholders rely upon the reports and statements of their managers at the respective mines—if otherwise, at once secure the services of others upon whose reports you, as shareholders, can rely. Under no circumstances should shareholders heed "market" rumours, as they are circulated for the especial behoof of the circulators. Even "practical" men, so-called, in too many instances are "practical" only in self-assertive egotism, and have no higher proof of ability than a conceited parade of this ill-used word "practical."

WEST PATELEY BRIDGE LEAD MINES.—Scanning the *Mining Journal* share list one finds that our home lead mines have capitals averaging from 30,000*l.* to 45,000*l.*, divided into 12,000 shares. To bring about a given result mines thus incorporated must necessarily return more than double the amount of lead than a mine—*caeteris paribus*—with a capital of 20,000*l.*, divided into 4000 shares (1000 of which are held in reserve). West Pateley Bridge has this manifest advantage—practically the effect is that an output of (say) 50 tons per month yields a result equally remunerative to the shareholders as 100 tons from a mine weighted with what would seem to be the prescriptive amount of capital. Nothing operates so adversely against the investing success of mines as the inordinate amounts with which they are too often capitalised; not infrequently a productive mine is thus made profitless to its shareholders, large returns even fail to be divisably profitable, because the capital is out of all proportion to the producing capacity of the mine. How much more satisfactory to all concerned were mines initiated upon an equitable basis—equitable as between shareholders and former owners. Upon this fundamentally sound principle the West Pateley Bridge Company has been formed, hence there is contributed an almost exceptional element towards increasing the shareholders' prosperity, because the efficient development of the property is the more completely secured. Closing price, 5½ to 6.

ROOKHOPE VALLEY (Lead).—Considerable transactions have taken place in these shares. Many former shareholders now appear as purchasers, whereas they would not respond to the application for new capital in the old company. As these mines have passed into the hands of a new company it may be useful to inform the shareholders that their geological formation is the mountain or carboniferous limestone—one of the most distinct and unmistakeable in the whole crust of the earth. Whether consisting of one thick bed of limestone, or of many beds with alternating shales and gritty sandstones, its peculiar corals, encrinities, and shells distinguish it at once from all other series of strata. In fact, it forms in the rocky crust a zone so marked and peculiar that it becomes a guiding post not only to the miner in the carboniferous system, but to geologist in his researches among other strata. The rocks of the Weardale district, in which the Rookhope Mines are situate, belong to these limestone measures, and may be described as alternating beds or strata of limestone, sandstone, or shale, with one layer of trap-rock, which in most cases throughout the Rookhope district forms the base of the lead-producing rocks. As mentioned last week, the mines contain three distinct groups of lodes. The principal lode in No. 1 Mine is known as the Great Red Vein (so prolific in the adjoining "W. B." mines). A well-known practical authority says—"Judging from the well-known character of the mines in the locality (they yield solid ore), and from the great length and width of the old workings along the upper part of the lode, very large returns have been sent to market therefrom; it is doubtful, however, whether Golden's vein and the side lodes have been more than just cut into in the coal sills; it is clear to me that all the lodes, as seen in proximity to the engine-shaft, are charged with lead ore in considerable quantities; and, seeing what the Great Red lode has done, and that Golden's and the side lodes have not been worked many fathoms north and east of the shaft, it is only reasonable to expect that on their development, even in the coal sills, large quantities of lead ore are in store for the company." Next week we purpose to continue our description of these extensive mines, meanwhile we would direct the favourable attention of investors to the shares. The capital of the former company was 30,000*l.*, in shares of 4*l.* each, which were in considerable demand at 7*l.* The present company is also divided into 15,000 shares, but of only 1*l.* 10*s.* each, while there is an ample working capital of something like 6000*l.*

BLUE TENT HYDRAULIC (Gold).—Replying to various clients who wish for information concerning the property held by this company, we may mention that it consists of 490 acres of auriferous gravel, situated on the South Yuba River, within 15 miles of the Pacific Railway, and about 5 miles from Nevada City, California. It is in the midst of a well-watered, salubrious, and fruitful region, free from severe frosts and heavy snows, and where the average rainfall is 60 in. This entire area is within the limits of the ancient river channel, or Great Blue Lead of California, and in the region of all others has been most celebrated for the uniform success of its deep gravel placers. The company also possesses valuable water rights. Nothing more can be desired than the natural position of the ravines and gorges for the economical working of the mine. The property is made up of a number of claims formerly held by various owners; these may be described as—the Blue Lead, Enterprise, Dant, Smith, Cooper, Gopher, Johnson, South Yuba, Blue Lead, Bed Rock, and Empire claims, all of which are now held by the Blue Tent Company. On some of these small ownerships work has been performed in the neighbourhood for ten or twelve years past in rather a small way. These workings are for the most part quite superficial, and in only two or three of them has the bed rock been reached. The main result of these workings has been to prove the uniformity of tenor in the gold value of the upper gravels, and the richness of those upon the bed rock. It is hardly possible to obtain full and accurate returns of the values washed out, but the following summary has been made up from the best data obtainable; the aggregates given do not exceed, and it is believed fall considerably short of, the amounts actually obtained:—The gross yield of gold from the Gopher claim, $275,000; Doult, Cooper, and Smith, $160,000; Enterprise, $175,000; Empire, $50,000; Blue Lead and Bed Rock, $50,000; South Yuba and Johnson, $60,000; these make a total of $770,000. These expenses are estimated at one-fourth of the gross returns. To obtain this amount of gold about 23 acres have been worked over superficially, and two acres in the Gopher claim have been worked to the bed rock. We mentioned last week that the total value of gold gravel was 415,866,359 cubic yards, and its net value $44,256,643. As already stated, the expense usually attending hydraulic operations is from one-fourth to one-third of the gross returns, but probable the more satisfactory mode of computing net returns is found in the net profits of a given quantity of water used; 30 cents profit per inch (or $300 for each 1000 inches miners' measure) of water used for 24 hours may be safely calculated upon from average gravel washings. Upon this plan of computation for safety, shortening the water season to eight months, and limiting the supply to 3000 in., we have a net profit from this property of $216,000 per annum. In view of breakages and delays, and all possible contingencies, and covering all accruing expenses, the net profit may safely be put down at $150,000 per annum; this will be equal to a dividend of 20 per cent. per annum upon the capital of the company. The shares have again been firm at improving quotations.

ARGENTINE (Gold).—A large amount of business has been done in these shares during the week. Operations upon an extensive scale are in progress. Another shipment of machinery has been made, so that gold returns may shortly be looked for upon a scale that will soon place this property in a dividend-paying position. The deepest workings at Piqué yield an average of 2½ ozs. of gold per ton.

CONDES COMPANY OF CHILI (SILVER).—Seven mines are comprised within this company's property, extending a total length exceeding three miles. As mentioned last week the lodes have been opened more or less in all the mines, but the Isolina has been the most extensively worked. Here the lode has been opened up for upwards of 65 metres in length and 35 in depth. With one or two insignificant exceptions the lode throughout has been rich; in the ends of the levels and the bottom of the shaft the lode is described as richer than at any previous point of development. The cross-cut commenced to intersect the lode 140 metres below the present workings will also intersect six other lodes, considerably enhancing the value of the company's property. This cross cut has been driven about 22 metres, and the Isolina lode is expected to be cut in about 120 metres more. In the event of this lode being cut rich the output willl be limited only by the number of miners employed.

STOCK EXCHANGE GENERAL MARKETS.—Continuing our remarks upon how investors may profitably change their investments we may add as regards the objection of the payments on a new loan extending over several months, the whole amount may nearly always be paid at once. Another instance of an opportunity being offered to the holders of the stock is when the market price is forced up by some artificial means to a point much beyond its legitimate level. Such instances may generally be noticed by the discrepancy which is discernible between the price of the stock so influenced and the prices of other issues of the same class. In such cases a holder may either exchange into other securities of the same class, or sell his stock, and in the course of a short time re-purchase it, as he is sure to be able to do at a very much lower figure. Again, another opportunity is often to be found at a time of panic, and when the prices of certain securities are severely depressed. At such times some stocks are always more affected than others; that is to say, these in which there happens to be a large amount of speculation open will suffer far more than others, although they may be of the same class and description. Very profitable exchanges may, under such circumstances, sometimes be made. The fluctuations that take place in the prices of most kinds of securities from year to year offer in many ways opportunities to holders. The possessors of speculative stocks who have held them for several years will certainly act wisely if, when they find that their capital is increased to a considerable extent by a rise in prices they secure the profit, and, if possible, reinvest their capital in a less speculative quarter; for speculative—that is to say, high interest-paying—securities should be regarded as a means, not an end.

MINING IN CORK AND KERRY.

[BY OUR SPECIAL CORRESPONDENT.]

It appears that some of the mineral properties in the above counties, recently described in the *Mining Journal* by your "Special Correspondent," have been carefully examined by an English capitalist and English miners within the last week or two, and that the statements of your correspondent have not only been fully confirmed, but it has been proved that the *bona fide* character of the various properties far exceeds in value his representions. If men of capital in England would come and see for themselves they would find ample scope for its profitable investment, rather than losing millions sterling in foreign schemes, and it is to be hoped that the great swindles of the last few years will have taught the public such a useful lesson that they will in future exercise common sense, and turn to good account and certain profit the mineral wealth of our home mines. In a few hours the remotest parts of Cork or Kerry may be reached from London or other places in England, and valuable mines may be seen of copper, lead, blende, iron, arsenical pyrites, pure sulphate of barytes, also slate and flag quarries of the best quality. These mines and quarries are most favourably situated, and the produce, in many instances, may be shipped direct from the works. In no case would there be long land carriage. Investors need not go to Corsica or elsewhere in search of copper mines while Ireland presents an unrivalled field of undeveloped mineral wealth, besides water-power equal to thousands of steam-engines running waste year after year into the ocean. The landed proprietors of Cork and Kerry will grant long leases to *bona fide* capitalists on most liberal terms, the Earl of Bandon having within the last few days granted extensive iron mines in West Cork, situate within 300 yards of a shipping place, at a royalty of 4d. per ton. He has also granted an excellent slate quarry, close to a shipping place, at a royalty of 1-18th. In the Kenmare district, County Kerry, there are some of the most extensive old ironworks in the United Kingdom, and from which enormous quantities of iron ore must have been raised near the surface. Those extensive iron mines have been granted by the Marquis of Lansdowne at a royalty of 4d. per ton, and the copper, silver-lead, and blende mines on royalties equally liberal. Capital, therefore, if judiciously invested, and properly and honestly applied in the development of the minerals of Cork and Kerry, cannot fail to produce great and lasting profits.

Died.—We are called on to record the death of one of our most deserving mine agents, Capt. EDWARD BLEWETT, Reawla House, Gwinear, Cornwall, at the age of 47. He began his mining career at the Rosewarne United Mines under his father's management, then at the Rosewarne and Herland Mines, after which he superintended a mine in Norway from the year 1864. Although he was obliged to resign the management of the mines on account of a disease which first showed symptoms in the year 1868, when he was bereft of three of his children in one night, yet his advice and opinion was asked, attended with a liberal remuneration. In Norway, his knowledge of mechanics, which he acquired at the Hayle Foundry, was called into requisition, as seen by his encouraging all new inventions and explosives. His mining experience, as he noted every phenomena, coupled with such a wise discretion and judgment, as that in every point he suggested to the company as deserving of trial was found to be highly productive, soon brought him prominently before the public; thence he was called on to inspect very many of the continental mines. Since his son's death in 1874, who was to manage one of the Chilian mines, but who died four days after his arrival in that country, Capt. Blewett spent his time in writing; and the *Mining Journal* has been favoured with some of these productions. He died on the 8th inst.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

NATIONAL BANK OF PARAGUAY (Limited).—Capital 30,000*l.*, in 10*l.* shares. To establish a bank in connection with Paraguay. The subscribers (who take one share each) are—F. Murdett, Ancaster House, Richmond; G. H. Jay, 16, Westbourne road, Hyde Park; J. P. Leith, Albemarle-street; J. R. Craskey, 43, Portsdown-road, Maida Vale; S. L. Tomkins, 76, Lombard street; H. D. Blyth, 60, Cleveland-square; and A. F. Baillie, 17, Palace Gardens Terrace, W.

GENOA WATERWORKS COMPANY (Limited).—Capital 150,000*l.* in 10*l.* shares. To supply Genoa with water. The subscribers (who take one share each) are—Wilford Brett, Esher; Chas. Crokat, 106, Fenchurch-street; G. B. Houghton, Holmsley Lodge, Sunbury; F. L. Heseltine; J. Marmont, 9, Duke-street, Portland place; J. Pickering, 21, New Bridge-street, Blackfriars; J. McMillan, 7, Westminster Chambers.

FARMERS' MALT CAKE COMPANY (Limited).—Capital 60,000*l.*, in 10*l.* shares. To manufacture and sell malt cake for cattle. The subscribers are—J. Adams, Bishop Stortford, 100; H. Bird, Peterborough, 30; J. Collins, Bush Hill, Winchmore Hill, 50; C. J. Macadam, 109, Fenchurch street, 25; R. S. Spence, Bishop Stortford, 30; R. Leech, Beswick Old Hall, Norwich, 30; C. Dolman, 23, Craven-street, Strand.

SEACOMBE PHOSPHO-GUANO COMPANY (Limited).—Capital 175,500*l.*, in 7*l.* shares. To acquire the business and assets of the Phospho-Guano Company (Limited). The subscribers are—R. P. Wood, Bankhouse, Liverpool; G. B. Cadell, Birkenhead; R. N. Dale, Bromborough Hall, Cheshire; T. Mitten, The Elms, Gasford; S. Stett, The Grange, Claughton; W. B. Hilton, Stanley-road, Liverpool; W. Stone, 6, Cook-street, Liverpool.

ATHLONE BRICK AND TILE COMPANY (Limited).—Capital 25,000*l.*, in 5*l.* shares. To carry on business as brick and tile manufacturers at Athlone. The subscribers are—Augustus F. Webster, Hildon House, near Stockbridge, 20; W. H. Charlton, 9, Gracechurch-street, 20; F. Caveat, Upper Norwood, 20; F. C. Elton, South Norwood, 20; E. Spoon, 16, Craven-street, Strand, 20; A. C. Sprange, 1, Church-court, Clement's-lane, 15; G. J. Cownley, 7, Oxford-terrace, New Peckham.

NEWCASTLE GENERAL A 1 INSURANCE ASSOCIATION.—This is an unlimited company, the object being the mutual insurance of ships. The subscribers, who are all shipowners of Newcastle, are—Henry Nelson, G. Fenwick, J. Hull, J. J. Scott, Richard Humble, J. Nixon, and Thomas Eccles.

NEWCASTLE GENERAL IRON STEAMSHIP INSURANCE ASSOCIATION.—This is also an unlimited company, the subscribers being H. Nelson, G. Bell, W. S. Lishman, Arthur Pring, R. S. Donkin, T. G. Dunsford, and R. W. Tuillets, all of Newcastle.

TYNE AND WEAR IRON STEAMSHIP INSURANCE ASSOCIATION—NEWCASTE A 1 FREIGHT INSURANCE ASSOCIATION.—These two companies are unlimited, and the subscribers are nearly the same as in the case of the two preceding companies.

BIRKENHEAD BARYTES COMPANY (Limited).—Capital 5000*l.*, in 1*l.* shares. To acquire the premises, situate in Birkenhead, of the British Barytes Company (Limited), and all the interest of the old company, and of Mr. George Ridler, the liquidator, subject to the existing mortgages, and to the claims (if any) the debenture holders of the company may have upon the premises, according to an agreement made between G. Ridler of the one part, and T. L. Strange, and T. S. G. Kirkpatrick of the other. The consideration money is 50*l.* The subscribers (who take one share each) are—T. S. G. Kirkpatrick, Great Winchester-street, esquire; S. L. Giles, 63, Thistle Grove, Brompton, paymaster-in-chief, R.N.; A. Chandler, Lynton Villa, Lower Richmond-road, Putney, secretary; C. S. Nottingham, 19, Victoria road, Kilburn, gentleman; T. Aucland, 21, Great Winchester-street, secretary; C. Wright, 61, Gresham House; and J. Mason, Peckham Grove.

R. ALLEN AND SON (Limited).—Capital 50,000*l.*, in 10*l* shares. To acquire the business of Messrs. R. Allen and Son, of Caxton House, Nottingham, stationer, The subscribers (who take 10 shares) are—Richard Allen, Albert Villas, The Park, Nottingham; M. H. Allen, Nottingham; J. Dawes, Sherwood road, Nottingham; A. Cleaver, Nottingham; G. H. Buttram, The Park, Nottingham; J. Payne, Leicester; J. Martin, Nottingham.

C. F. COSTERTON AND COMPANY (Limited).—Capital 20,000*l.*, in 1*l.* shares. To acquire the flax and jute mills of C. F. Costerton, at Scole, Norfolk. The subscribers are—W. W. Bird, 20, Great Winchester-street; T. E. Mardon, 1, Florence Villas, Feltham; J. O. Surtees, Thicket-road, Annerley; F. Ommanney, 88, Coleman-street; Thos. Bishop, 3, Priory street, Camden Town; W. G. Meill, 42, Finsbury Circus; R. Gudgeon, St. Mary's Lodge, Peckham.

REGENT STORES (Limited).—Capital 100,000*l.*, in 5*l.* shares. To carry on business as a supply company. The subscribers (who take one share each) are—D. Swanson, 69, Leadenhall-street; E. Bratt, 69, High street, Homerton; E. B. Burrs, Fenchurch street, W. J. Coleman, Thornton Heath; A. B. Hughes, 11, Lawrence, Pountney lane; T. Sickell, 60, Basinghall-street; A. H. Loder, 81, Southampton-row.

ALBION PROPERTY COMPANY (Limited).—Capital 50,000*l.*, in 10*l.* shares. This is a Manchester property company. The subscribers (who take 10 shares each) are—Robert Smith, Manchester; R. Westbury, Manchester; Thos Roebuck, 50, Sackville-street, Manchester; J. D. Harrop, Albion Mills, Manchester; J. D. Brocklehurst, Edge-street, Manchester; C. Heywood, 19, Mount-street, Manchester; and J. R. Hartley, Manchester.

LEE AND COMPANY (Limited).—Capital 15,000*l.*, in 10*l.* shares. To carry on the manufacture of oils.

A. AND G. MURRAY (Limited).—Capital 100,000*l.*, in 1000*l.* shares. To carry on the business of cotton spinners and manufacturers now carried on by B. R. Murray and H. Murray, of Ancoats, Manchester. The subscribers (who take one share each) are—Charles Lings, Manchester; J. Higginson, Reddish, Lancashire; G. S. Lings, Reddish; J. Jardine, Manchester; J. A. Jardine, Manchester; J. Oliver, Manchester; J. H. Houldsworthy, Manchester.

GROSVENOR BUILDING COMPANY (Limited).—Capital 10,000*l.*, in 10*l.* shares. This is a Great Grimsby Building Company.

HINTON'S CONDENSED PEAT FUEL COMPANY (Limited).—Capital 20,000*l.*, in 1*l.* shares. To deal in peat and other fuels.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week there has been a limited amount of business passing. Shares in iron and coal concerns are reduced in price nearly all round, the only advance being ⅜ on Shotts Iron (New). The reductions comprise—2½ on Nant-y-Glo and Blaina (Preferred), ½ on Bolckow, Vaughan, "A," ½ on Monkland (Guaranteed), 3-16ths each on Benhar (all paid) and Marbella, ¼ on Benhar (new), and 1*s.* 6*d.* each on Glasgow Port Washington (all paid), and ditto (prepaid). Cardiff and Swansea higher at 2¾, buyers; Chapel House, 2¾ to 3⅛; Whitehaven Iron, 3⅛ to 3¼. In foreign copper shares Tharsis have been well supported, which looks like the 25 per cent. dividend being maintained, and it is said the accounts should read well. Canadian Pyrites a trifle higher, but Huntington has lost 4*s.* 6*d.* Yorke Peninsula, 8*s.* 9*d.*, sellers. Bernsberg Lead is lower at 3⅛, sellers. Little doing in home undertakings. Dunsley Wheal Phœnix quoted better at 1*s.* to 2*s.* Glasgow Caradon descriptions now quoted ex div. at 32*s.* (all paid), 22*s.* (15*s.* paid); this seems one of the safest shares to buy at present, the dividend being practically guaranteed for years to come by the great reserves (30,000*l.* to 40,000*l.*) laid open in the mine. New Pembrokes are about ¼ to ½. In gold and silver mines shares Emmas are lower 6*s.*; Flagstaff, ⅛; and Richmond, ⅜. Exchequer is 1 to 1¼, and South Aurora ⅛ to ¾. In oil shares Young's Paraffin is ⅛ higher, and Dalmeny shares quoted 10⅜., ex div. In miscellaneous Peruvians Nitrate is ⅛ lower, but London and Glasgow Engineering, &c., is in request at an advance of ⅛. Scottish Wagon shares are now also quoted ex div. A detailed list of the several days' business follows:—

ON THURSDAY last the market was quiet. Benhar, 11⅛ to 11¼. Canadian Copper Pyrites, 37*s.* to 40*s.* East Van, 21⅛ to 21¾. Ebbw Vale done at 13 9-16ths, closing 13⅛ to 13¾. Glasgow Caradon, 33*s.* 6*d.* to 34*s.* 6*d.*; new shares, 23*s.* to 23*s.* 6*d.* Glasgow Port Washington, 82*s.* sellers. Huntington done at 24*s.* 6*d.*, closing 23*s.* to 24*s.* Monkland, 59*s.* to 60*s.*; Seven per Cent. Guaranteed done at 6¼, closing 6⅛ to 6¼. Omoa anh Cleland done at 41*s.* 6*d.*, closing 41*s.* to 42*s.* Richmond done at 7 1-16ths, closing 7 1-16th to 7 3-16ths. Tharsis done at 24½ and 24¼, closing 24 3-16ths to 24¼; new shares done at 16⅛, closing 16 to 16¼. Young's Paraffin done at 8¼, closing 8⅛ to 8¼. Scottish Wagon (all paid), 11⅛ to 12; new shares, 4½ to 4⅝.

ON FRIDAY the business done was moderate. Benhar, 11 to 11¼. Canadian Copper Pyrites, 38*s.* 6*d.* to 40*s.* Dunsley Wheal Phœnix, 1*s.* to 2*s.* East Van, 21 to 21⅛. Ebbw Vale done at 13 9 16ths, closing 13½ to 13¾. Emmas done at 2¼, closing 49*s.* to 51*s.* Huntington done at 23*s.* to 22*s.*, closing 22*s.* 6*d.* to 24*s.* London and Glasgow Engineering, &c, shares were in request at 2, 3, or ½ higher. Marbella, 77*s.* to 78*s.* New Pembroke (all paid), 11*s.* sellers. Omoa and Cleland done at 41*s.* and 40*s.* 6*d.*, closing 40*s.* to 41*s.* Richmond done at 7 1 16ths, closing 7 to 7⅛. Tharsis done at 24⅛, closing 24½ to 24⅜. Young's Paraffin done at 8 3-16ths and 8¼, closing 8⅛ to 8¾. Scottish Wagon (all paid), 11⅛ to 11⅞; new shares, 4½ to 4¾.

ON SATURDAY a small amount of business done. Benhar, 11 16ths to 11 3 16ths. Canadian Copper Pyrites done at 37*s.*, closing 35*s.* to 37*s.* Emmas done at 49*s.*, closing 49*s.* to 50*s.* Glasgow Caradon done at 33*s.* 6*d.*, closing 33*s.* 6*d.* to 34*s.*; new shares, 23*s.* 6*d.* to 24*s.*; this month's sale of ore is computed at 250 tons, last month's sale being 240 tons, and the corresponding sales in 1875 and 1874, 240 and 250 tons respectively; there should be a favourable comparison. Huntington, 22*s.* to 24*s.* Killifreth, 13*s.* buyers. Monkland done at 59*s.*, closing 59*s.* to 60*s.*; Seven per Cent. Guaranteed, 6¼ sellers. Omoa and Cleland, 41*s* to 43*s.* Richmond done at 7 1-16th and 7, closing 6 15-16ths to 7. Tharsis, 24¼ to 24¾. Young's Paraffin done at 8¼, closing 8 3-16ths to 8 5-16ths. Scottish Wagon (all paid), 11⅛ to 11.

ON MONDAY the market continued quiet. Benhar, 11 to 11¼; new shares 6⅝ to 6⅝. Bensberg lead, 3½, sellers. Colorado Terrible higher, at 1⅞. East Van, 19¾ to 20. Ebbw Vale, 13⅜ to 13⅝. Emma, 49*s.* to 50*s.* Glasgow Caradon done at 33*s.* 6*d.* to 34*s.*, closing at these prices. Glasgow Port Washington, all-paid and pre-paid both lower, at 80*s.* to 81*s.* Huntington done at 21*s.*, closing 20*s.* to 22*s.* Monkland done at 59*s.*, closing 59*s.* to 60*s.* New Pembroke 11*s.*, sellers. Omoa and Cleland, 41*s.* to 43*s.* Plynlimmon lead, 1 to 1¼. Richmond done at 7, closing 6 15-16ths to 7. Shotts Iron (new) shares, 10⅜, buyers. Tharsis done at 24⅜, closing 24½ to 24⅜; new shares done at 16¼, closing 16¼ to 16⅜. Young's Paraffin changed hands from 8 1-16th to 8¼, closing 8⅛ to 8¼. Scottish Wagon (all-paid), 11⅛ to 12; new shares 4½ to 4¾.

GLASGOW CARADON CONSOLIDATED COPPER MINING COMPANY (Limited).—At the sixteenth general meeting of shareholders, held to-day (Monday), the report (given last week) was unanimously adopted, and the dividend declared. The sum of 100*l.* was voted to the directors for their services for the year, and the three retiring directors re-elected. The Chairman said they might congratulate themselves on having a nice little mine. Their prospects for the future were quite equal to what they had been, and if copper was maintained at a fair price from the large reserve they had in the mine their profits would be some-

what similar to former years, if not greater. At last annual meeting they were authorised to sink a new shaft at a probable cost of 1000*l*. This work had been carried on vigorously, and it was now cased and finished to the 45, and a winze had been sunk to the 78. The expense so far had been only 731*l*., of which sum 520*l*., the cost of labour, had been charged to revenue, and the remainder (210*l*.) added to capital account, being the expenditure for plant and material used in constructing the shaft. Only 6 tons more copper had been sold in 1875 than in 1874, yet they had realised 1400*l*. more for it, thus enabling them not only to give a larger dividend than on former occasions, but also to pay the sinking of the shaft. In reply to a shareholder, the Chairman stated that the new leases had 21 years to run from the present time.

On TUESDAY (being contango day) there was, as usual, little disposition to enter into fresh transactions. Benhar, done at 11 1-16th. Bolckow, Vaughan, A, 52 to 52½. Chapel House Colliery, 2¼ to 3¼. Dunsley Wheal Phœnix, 1s. to 2s. Emma, done at 49s., closing 49s. to 50s. Glasgow Caradon, 83s. 6d. to 34s. 6d. Huntington, done at 20s., closing 2 3s. to 21s. New Pembroke, 4s. to 11s. Omoa and Cleland, 41s. to 43s. Peruvian Nitrate, 10½, sellers. Richmond, opened at 6⅞, but fell to 6¼, closing 6⅛ to 6⅝. Shotts Iron (new), 10⅜ to 10⅝. South Aurora, ½ to ¾. Tharsis, 24 1-16th to 24 3-16ths; new shares done at 16⅜, closing 16¼ to 16⅜. Young's Paraffin, done at 8¼, closing 8 3-16ths to 8¼. Scottish Wagon (all paid), 11½ to 11⅞; new shares, 4½ to 4¾. The following were the rates of continuation current to-day:—Contangoes: 2½d. on Canadian Copper Pyrites; 2d. on Glasgow Caradon; 1¼d. on new shares; 3d. on Port Washington; 3d. on Huntington; 3d. on Marbella; 3d. on Monkland Iron; 3½d., 4d. on Omoa and Cleland; 1d., even on Richmond; 6d. on Rio Tinto; 1s. 6d. on Tharsis; 6d. on new shares; 6d., 7d. on Young's Paraffin.—Backwardations: 1d. on Emma; 5s. on Shotts. The making up prices of the following shares, fixed to-day, show, on comparison with those at last settlement, the following variations per share.—Canadian Copper Pyrites, 4s.; Glasgow Caradon, all paid and new shares, each 6d.; Monkland (ordinary), 3s.; Tharsis (all paid), ¾; ditto (new shares), ¼; and Young's Paraffin, ½—all higher; while the following are lower:—Emma, 1s.; Glasgow Port Washington, 1s. 6d.; Huntington, 4s. 6d.; Marbella, ⅝; Monkland (preference), ¼; Omoa and Cleland, 8s.; and Richmond and Rio Tinto, each ¼. Shotts Iron shows no variation.

On WEDNESDAY the account opened for settlement Feb. 25. Tuesday, Feb. 22, will be contango day. The market was very quiet. Canadian Copper Pyrites done at 37s. 6d., closing at 37s. to 38s. Cardiff and Swansea Colliery, 2¾, buyers. Dalmeny Oil is now quoted, ex div., at 103s. East Van, 20¾ to 21. Emma, 48s. 6d. to 50s. Exchequer, 1 to 1¼. Flagstaff, 1¼ to 1⅜. Glasgow Caradon shares are now quoted, ex div., the all-paid shares at 32s., and the new issue at 22s. Kapunda, ¾, sellers. Marbella done at 77s., closing 77s. to 78. New Pembroke, 4s. to 8s. Omoa and Cleland, 42s. to 43s. Plynlimmon (Lead), ⅞, sellers. Richmond opened at 6¼, advanced to 7, but fell back to 6¾, closing 6⅝ to 6¾; this week's run is 835,000. Shotts Iron now done at 10⅝. Tharsis done at 24¼ and 24¼, closing 24⅛ to 24⅜. Young's Paraffin done at 8¼, closing 8 3-16ths to 8¼. Yorke Peninsula, 8s. 9d., sellers. Scottish Wagon shares, now also quoted ex div., all paid 11 31-6ths to 11½, and 4*l*. paid at 4 7-16ths to 4 11-16ths.

The following are the last prices of some shares occasionally dealt in on this market:—Iron, Steel, and Coal Companies: Britannia Ironworks, 10, sellers; Cardiff and Swansea Smokeless Steam Coal, 2⅞, buyers; Chapel House Colliery, 2¾ to 3¼; Lehigh and Wilkes Barre 6 per cent. first mortgage, guaranteed by Central Railroad of New Jersey (U.S.), 93 to 95; Mwyndy Iron Ore, 1½ to 2; West Cumberland Iron and Steel, 14½; Whitehaven Iron, 3½ to 3¾.—Copper, Lead, Tin, &c., Companies: Bedford United, 1¼, sellers; Bensberg Lead, 2½, sellers; Drake Walls, ⅞, sellers; East Caradon, 2¾ to 3; East Wheal Grenville, ⅛; East Van, 20¾ to 21; Elgar, 1; Gunnislake (Clitters), 3⅜ to 3⅝; Hingston Down, ¾ to 1; Killifreth, 14s., buyers; Marke Valley, 3⅜ to 3⅝; New Consols, 1¼ to 1½; New Pembroke, ⅛ to ⅜; Parys Mountain, 1 to 1⅛; Penstruthal, 9s. to 11s.; Prince of Wales, ⅛ to ⅜; Plynlimmon Lead, ⅞, sellers; Snowbrook, 5; South Roskear, 1½, sellers; Tyllwyd, ¾ to 1¼; Van, 37 to 38; West Esgair Lle, ¾, sellers; West Maria and Fortescue, ⅜, sellers; Wheal Kitty (St. Agnes), 2½; Yorke Peninsula 15 per cent. guaranteed preference, ¾ to 1.—Gold and Silver Companies: Almada and Tirito, ½ to ¾; Battle Mountain, 1 to 1½; Chontales, ⅜ to ⅝; Colorado Terrible Lode, 1¾ to 2¼; Don Pedro North del Rey, ¼ to ⅜; Exchequer, 1 to 1¼; Frontino and Bolivia, 2 to 2¼; I.X.L., ½ to ¾; Javali, ½ to ⅝; New Pacific, ¼; Pestarena United, ½; Rica, 2s. to 4s.; South Aurora, ½ to ¾; Tecoma, 1 to 1½; Welsh (The) Gold, 1s. to 3s.—Miscellaneous Companies: General Sewage and Manure, 2 to 3; Langdale's Chemical, 5¼; Lawe's Chemical, 7⅜; and subjoined are the latest prices, &c., of those having quotations on the Stock Exchanges:—

Capital. Per share.	Paid up.	Dividends. Rate per cent. per annum. Previous.	Last.	Description of shares.	Last price.
				COAL, IRON, STEEL.	
£10	£6	£10	£10	Arniston Coal (Limited)	7½
10	10	14	9	Benhar Coal (Limited)	11 1-16
10	6	14	9	Ditto	6⅝
100	35	12½†	12½	Bolckow, Vaughan, and Co. (Lim.) A.	52½
10	10	10	10	Cairntable Gas Coal (Limited)	9½
10	10	5	nil	Chillington Iron (Limited)	5
32	29	7	½†	Ebbw Vale Steel, Iron, and Coal (Lim.)	13½
10	4	nil	nil	Fife Coal (Limited)	4
10	10	—	—	Glasgow Port Washington Iron & Coal (L)	81s.
10	10	—	—	Ditto Prepaid	81s.
10	10	—	—	Lochore and Capledrae (Limited)	7¾
10	10	5s 7d	5	Marbella Iron Ore (Limited)	77s.
10	10	5	nil	Monkland Iron and Coal (Limited)	59s.
10	10	7	7	Ditto Guaranteed Preference	6½
100	100	nil	nil	Nant-y-Glo & Blaina Ironworks pref. (L)	32½
10	4	15	nil	Omoa and Cleland Iron and Coal (Lim.)	42s.
1	1	15	12½	Scottish Australian Mining (Limited)	1⅛
50	50	10	5	Shotts Iron	65
10	10	10	5	Ditto New, issued at 2½ prem.	10⅝
				COPPER, SULPHUR, TIN.	
10	7	—	—	Canadian Copper Pyrites (Limited)	1⅞
10	10	—	—	Ditto All paid	6½
10	7	20s	20s	Cape Copper (Limited)	39
2	2	—	—	Dunsley Wheal Phœnix Tin (Limited)	1s.
1	1	12½	12½	Glasgow Caradon Copper Mining (Lim.)	32s.
1	15s.	12½	12½	Ditto New	22s.
10	9	—	5	Huntington Copper and Sulphur (Lim.)	1
25s.	23s.	—	—	Kapunda Mining (Limited)	⅛
4	4	—	—	Panulcillo Copper (Limited)	1½
10	10	6†	6†	Rio Tinto (Limited)	5¼
10	10	nil	nil	Russian Copper (Limited)	3
10	10	25	25	Tharsis Copper and Sulphur (Limited)	24¼
10	7	25	25	Ditto New	16¾
1	1	—	—	Yorke Peninsula Mining (Limited)	8s. 9d.
				GOLD, SILVER.	
1	1	5	5	Australian Mines Investment (Limited)	⅝
20	20	—	—	Emma Silver Mining (Limited)	49s.
10	10	—	—	Flagstaff Silver Mining (Limited)	1¾
5	5	—	—	Last Chance Silver Mining (Limited)	¾
	5	—	35	Richmond Mining (Limited)	6⅞
				OIL.	
10	7	2½	5	Dalmeny Oil (Limited)	103s.
10	10	—	—	Uphall Mineral Oil (Limited)	5
10	8½	5	5	Young's Paraffin Light & Mineral Oil (L)	8¼
				MISCELLANEOUS.	
50	25	15	15	London and Glasgow Engineering & Iron Shipbuilding (Limited)	23
20	11½	—	—	Peruvian Nitrate (Limited)	10½
10	10	8	5	Scottish Wagon (Limited)	11 3-16
10	4	8	5	Ditto New	4 7-16

† Interim. ‖ Per share.

Last day for this account Feb. 22; settling day, Feb. 25.

NOTE.—The above lists of mines and auxiliary associations is as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in these lists, they will be good enough to communicate the name of the company, with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker.

Post Office Buildings, Stirling, Feb. 10.

HALIFAX.—Feb. 10: The following quotations are from Mr. J. H. Thackrah's list:—Halifax and Huddersfield Union Bank, 30; Halifax Joint-Stock Bank, 23½ (ex div.); Halifax Commercial Bank, 24½ (ex div.); London and Yorkshire Bank, 26s. 6d. (ex div.); John Crossley's, 13½ (ex div.); Whitworth and Co., 8¼; Elland Gas, 20; Rastrick Gas, 18½; Bradford Brick and Tile, A, 23½; B, 7¾; Charlestown Brick and Tile, 9¼; Ripponden Commercial, 12½; Hebden Bridge Cotton, 10½; Yorkshire Boiler Insurance Company, 22s. 6d.; Norton Brothers, 7¼.

SHEFFIELD.—Mr. J. R. Heard, share broker, in his weekly list, says—Bilbao Iron Ore Company, 44½ to 46½; Bolckow, Vaughan, and Co., 17 to 17½ prem.; Chas. Cammell and Co., 6¾ to 6¼, 5¾ dis, odd lot 6½ dis.; Ebbw Vale Company, 15¾ to 15½ dis.; Hopkins, Gilks, and Co., 6½ to 6 dis.; John Brown and Co., 6¼ to 6¾ prem.; Midland Iron Company, 1½ to 3½ prem.; Parkgate Iron Company, 12 to 13 prem.; Sheepbridge Coal Company, 17¼ to 17¾ prem. (ex div.), 17¾ prem.; Staveley Coal Company, A, 44½ to 45½ prem. (ex div.), 45 prem.; Davy Brothers, 10½ to 10⅞ prem., 10¾ prem.; Earl's Shipbuilding, 13 to 17 dis.; John Crossley and Sons, 4¼ to 4¾ prem., 3 11-16ths (ex div.); Josh. Rogers and Son, 205 to 210; Palmer's Shipbuilding Company, 14½ to 13½ dis.; Wm. Jessop and Sons, 3⅝ to 3¼ dis., odd lot 3, 3¼, 3⅜ dis.; London General Omnibus Company, 125 to 130; Sheffield Tramway Company, 8¾ to 8½; Sheffield Gas A stock, 209 to 210; Sheffield Gas B stock, 208 to 209.

CONDENSORS.—The features of novelty in the invention of Dr. FRANK PACKMAN, of Ringwood, Hants, consist in condensing all the exhaust steam without cold water, by causing it to pass into the centre of and around a separate ring boiler enclosed in a metallic case containing water, which is maintained at the boiling temperature, and at such temperature furnished to the main boiler. The exhaust then passes from the ring boiler to a chamber or chambers, where it is condensed by air passing over their outer surfaces, the said air becoming heated is supplied to the furnace of the boiler; the water of condensation passes into a "cooler," which consists of an inverted vessel having a cup or depression on its surface that receives the water through a transit pipe dipping into it, and from whence it flows over into a receiver beneath.

EPPS'S COCOA—GRATEFUL AND COMFORTING.—"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected cocoa, Mr. Epps has provided our breakfast tables with a delicately flavoured beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished me."—*Civil Service Gazette.*

THE IRON INDUSTRIES OF SOUTH WALES, GLAMORGANSHIRE.

BITUMINOUS COAL DISTRICTS.

By RICHARD MEADE, Assistant Keeper of Mining Records, Museum of Practical Geology.

The many important iron and other metallurgical industries, centered within the area occupied by the South Wales coal field, has led us to consider, as we have already done in our two preceding notices, first, an account of the coal field, with details of its production of coal and measures of ironstone; and, secondly, a brief sketch of the foreign districts, whence our imported ores are derived, with the quantities received in the various ports of South Wales, as distinguished from the total imports into the ports of Great Britain, also analyses of the ironstone measures and hematite deposits of Glamorganshire. In this notice we propose confining our enquiries to the production of pig-iron, tracing its progress from the earliest period in those districts of Glamorganshire in which coal of a bituminous character is employed in the blast-furnaces in the smelting of the ores, following with an account of the mills and forges, steel, and tin-plate works, and enquiring into the quantities of materials used—coal and ironstone in the above-named industries.

PIG-IRON MANUFACTURE.—In considering the rise and progress of this important industry we will, as previously stated, refer especially to the furnaces of Glamorganshire in which bituminous coal is employed, leaving for a subsequent notice those districts in South Wales in which anthracite is used in the manufacture of pig-iron. The smelting of the ores of iron appear to have been carried on in South Wales as early as the 15th century, the furnaces being erected on the mountain tops, exposed to the wind, charcoal alone being employed. At a later period we find the furnaces erected on sites in the valleys where water power could be advantageously used. The great consumption of charcoal necessary for iron smelting led to great scarcity of this necessary material, so much so that about the year 1740 the manufacture of iron was nearly extinct in South Wales, and it is recorded that in the same year the production of Glamorganshire amounted to 400 tons, the yield of two furnaces, while the yield of 59 furnaces then existing in England and Wales amounted to 17,350 tons of pig-iron,

With the successful application of pit coal previously coked, as a reducing agent in the blast-furnaces, by Mr. Abraham Darby, of the Coalbrookdale Works, in Shropshire, a new era was initiated in the manufacture of pig-iron, leading in subsequent years to greatly increased production. About the year 1755 Mr. Anthony Bacon erected a blast-furnace at Merthyr, smelting the ores of iron with coal previously coked. This was succeeded by others in the neighbouring districts, and in the year 1788 we find six furnaces producing 6600 tons of coke pig-iron, and three furnaces producing 1800 tons of charcoal pig-iron. In the same year in England and Wales the total production of pig-iron amounted to 61,300 tons, the make of 77 furnaces, of which number

24	furnaces yielded	13,100 tons of charcoal pig-iron
53	" "	48,200 " coke pig-iron
77	Total	61,300

Advancing to the year 1796 we find eight works in Glamorganshire, of which the following is a list, showing the number of furnaces in operation, and the production of pig-iron:—

Works.	Furnaces—No.	Pig iron.
Caerphilly	1	Tons 695
Cyfarthfa	3	7,204
Dowlais	3	2,800
Ennisygedyr	1	800
Llanelly	1	1,560
Neath Abbey	2	1,759
Pennydarren	3	4,100
Plymouth	1	2,200
Melincourt	1	648
Total	15	21,766

The total production of Great Britain at this period, 1796, was as follows:—

	Number of furnaces.	Pig-iron.	Average per furnace.
England	74 Tons	121,347	Tons 1640
Wales	28	45,994	1642
Scotland	17	16,066	946
Total	121	183,407	

Comparing the production of the year 1788 with that of the year 1796 it will be seen that the increase during this period of eight years amounted to 300 per cent., while the average yield of the furnaces also increased from 796 tons in the year 1788 to 1433 tons in the year 1796.

The next returns of production to which attention is directed is for the year 1806, when in Glamorganshire we find 10 works in operation, the following abstract showing the number of furnaces built and in blast, and their respective production of pig-iron:—

Works.	Furnaces. In.	Out.	Total.	Pig iron. Tons.
Aberdare	2	—	2	3,586
Abernant	1	1	2	4,376
Cyfarthfa	4	—	4	9,000
Dowlais	3	—	3	6,000
Caerphilly	1	—	1	1,000
Ennisggedyr	1	—	1	1,000
Llanelly	2	—	2	2,267
Melincourt	1	—	1	1,000
Neath Abbey	—	2	2	—
Pennydarren	3	—	3	6,780
Plymouth	3	—	3	5,000
Penruton	—	1	1	—
Total	21	4	25	40,009

The total production of pig-iron in Great Britain in the year 1806 of 216 furnaces, of which 161 were in blast, was 243,851 tons, and it is worthy of note that at this period the only other districts exceeding Glamorganshire in the make of pig-iron were those of Staffordshire and Shropshire, the former yielding 50,002 tons, and the latter 54,966 tons, while that of Scotland amounted to but 22,840 tons.

Not again until the year 1820 have we any information bearing on the production of pig-iron in Great Britain. In that year, however, Mr. David Mushet writes—"In a survey I made of the ironworks my computation of the annual quantity of pig-iron manufactured was as follows:—

Districts.	Quantities.
South Wales, &c.	Tons 150,000
Staffordshire and Shropshire	180,000
Yorkshire and Derbyshire	50,000
Scotland and other places	20,000
Total	400,000

We now come to the returns prepared by Mr. Frederick Finch, at the request of the Government, for the years 1823 and 1830, in which we find the total number of furnaces an l production of pig-iron summarised as follows, for South Wales:—

Years.	Number of furnaces.	Pig-iron.	Average per furnace.
1823	72	Tons 182,325	Tons 2532
1830	119	277,643	2333

The actual increase between the years 1823 and 1830 being 41 furnaces and 95,318 tons, equivalent to 28 per cent. Before giving in detail the production of the ironworks in Glamorganshire, it will be convenient for general reference to note the make of pig-iron in each of the above named years in Great Britain, amounting in 1823 to 455,166 tons, and in 1830 to 748,417 tons, and the proportion made by each district, which was as follows:—

Districts.	1823—Pig-iron.	1830—Pig-iron.
Northumberland and Durham	Tons 2,379	Tons 5,327
Yorkshire	27,311	28,926
Derbyshire	14,018	17,999
Shropshire	57,923	73,418
Staffordshire	133,590	282,604
South Wales	182,325	277,643
Scotland	24,500	37,500
North Wales	13,100	25,000
Total	455,166	748,417

These totals show an increase of production in seven years of 293,251 tons, or upwards of 60 per cent. The following abstract, prepared from Mr. Finch's return, shows the number of furnaces in operation, and the make of pig-iron in Glamorganshire, in each of the years 1823 and 1830:—

	1823. No. of furnaces	Pig iron.	1830. No. of furnaces.	Pig-iron.
Aberdare	3	Tons 2,878	3	Tons 6,285
Abernant	3	2,838	3	6,285
Cyfarthfa	8	24,200	9	29,000
Dowlais	8	22,287	12	32,611
Gadlys	—	—	—	—
Maesteg	—	—	1	2,430
Pentyrch	1	1,235	1	2,412
Plymouth	3	6,387	5	18,582
Penydarren	5	15,547	5	17,015
Cwm Avon	1	1,560	1	1,950
Neath Abbey	—	—	2	2,374
Race	3	3,173	3	2,421
Total	35	80,065	45	121,385

A comparison of the above named years shows an increase of 10 furnaces and 41,300 tons of pig-iron, equal to an increase in seven years of 50 per cent. A few years later we find the following works in Glamorganshire producing the quantities noted, as follows:—

Years.	Aberdare.	Cyfarthfa.	Dowlais.	Plymouth.
1829	Tons 8,644	Tons 24,768	Tons 23,352	Tons 13,534
1831	6,903	15,465	22,075	10,198
1833	6,984	37,380	35,072	12,093
1835	9,261	35,090	39,145	12,631
1837	9,830	33,580	38,914	15,353
1839	11,307	37,009	40,495	15,762

We now advance to the year 1857, when we find the production of pig-iron in Glamorganshire recorded year by year in the Mineral Statistics of the United Kingdom as follows, and for comparison, side by side, will be found the production of Great Britain:—

Years.	Glamorganshire. Furnaces built: in blast.	Pig-iron.	Great Britain. Pig-iron.
1857	87	76	Tons 436,859 Tons 3,659,447
1859	89	73	539,470 3,712,904
1861	78	59	453,821 3,712,390
1863	82	60	439,722 4,510,040
1865	81	64	408,416 4,825,254
1867	76	49	403,050 4,761,023
1869	79	53	348,475 5,445,757
1871	72	53	510,037 6,627,179
1872	71	51½	462,041 6,741,929
1873	73	51	424,384 6,566,451
1874	73	40	330,484 5,991,408

An examination of the above statement shows that in Glamorganshire the make of pig-iron has remained tolerably constant, while in Great Britain, since the year 1857, the production has increased nearly twofold. To render this section of the enquiry complete we append list of works, number of furnaces built and in blast, with the names of firms, &c., in Glamorganshire in 1874.

FURNACES USING BITUMINOUS COAL.

Name of Works.	Owners.	Furnaces. Built.	In blast.
Amman, Brynamman	Amman Iron Company	3	3*
Llwycoed, Abernant, and Taff Vale	The Aberdare Iron Company	5	3
Briton Ferry	Townsend, Wood, and Co.	2	2†
Cwm Avon, Oakwood	The Governor and Company of Copper Miners in England.	6	3‡
Cyfarthfa, Merthyr, Ynisfach	Robert Crawshay	11	4
Dowlais	Dowlais Iron Company	18	15
Llynvi Iron, Bridgend	Llynvi, Tondu, and Ogmore Coal & Iron Co. (Limited)	7	0
Gadly's, Aberdare	Wayne's Steam Coal and Ironworks (Limited)	4	2§
Melin, Griffiths, and Pentyrch	T. W. Booker and Co. (Limited)	2	2‖
Plymouth, Merthyr, Duffryn	Fothergill and Hankey	10	2
Forest Iron and Steel, Pontypridd	Forest Iron and Steel Co. (Limited)	3	2**
Tondu, Bridgend	Llynvi, Tondu, and Ogmore Coal & Iron Co. (Limited)	2	2
Total of Glamorganshire		73	40

* All out of blast during part of the year. † One only in blast for three months.
‡ Two only in blast for six months. § In blast for five months.
‖ One idle for five months. ** One only for seven and a half months.

The Mineral Statistics of the United Kingdom show the production of pig-iron in Great Britain to have been as follows in the year 1874; side by side will be found, for reference and comparison, the details of production of each of our iron districts during the year 1873:—

Counties.	1874. Quantities.	1873. Quantities.
ENGLAND:—		
Northumberland	Tons 33,142	Tons 44,807
Durham	829,235	799,873
Yorkshire, North Riding	1,158,471	1,156,431
ditto West Riding	163,856	151,511
Derbyshire	301,687	296,468
Lancashire	488,672	529,271
Cumberland	390,849	456,877
Shropshire	126,055	135,149
North Staffordshire	273,501	241,166
South Staffordshire	452,400	673,397
Northamptonshire	53,760	58,480
Lincolnshire	67,266	52,076
Gloucestershire	43,139	44,049
Wiltshire, Hampshire, Somersetshire	35,115	48,944
Total of England	4,417,139	4,688,199
NORTH WALES:—Denbighshire, Flintshire	51,868	42,773 24,690
SOUTH WALES:—*Anthracite* furnaces	23,700	32,922
Bituminous coal districts: Glamorganshire	330,484	424,384
Monmouthshire	360,480	360,583
Total of Wales	756,592	885,252
SCOTLAND:—Ayrshire	240,667	
Lanarkshire	501,541	
Fifeshire	13,854	
Linlithgowshire	35,778	993,000
Stirlingshire, Argyleshire	15,837	
Total of Scotland	807,677	993,000
Total of Great Britain	Tons 5,591,408	Tons 6,566,451

Thus the year 1874 shows a diminished production of 975,043 tons when compared with that of the previous year—a falling off of nearly one-seventh,—pointing out clearly the extent to which the iron ore and coal industries have been affected, independent of the various branches of labour necessary for the manufacture of so large a quantity of pig-iron. Speaking generally, it may be said that the above 975,043 tons of pig-iron represents nearly 2,000,000 tons of iron ore and 2,500,000 tons of coal: quantities that would have been employed had the pig-iron industries been as active in the year 1874 as they were in the previous year.

IRON ORE USED IN THE MANUFACTURE OF PIG-IRON.—The argillaceous iron ores of the coal measures of this district, or, as they are more generally known as "Native Mine," yield, as previously stated, an average of 33 per cent. of metallic iron; when alone employed 60 cwts. is required for each ton of pig-iron made, and the proportionate yield of pig-iron varies in all the works of the district, according to the admixture of "Native Mine," and the rich hematite of other districts and foreign countries, now so extensively employed in the ironworks of Glamorganshire. Thus in one establishment 25 cwts. of the high-class ores is sufficient for the manufacture of 1 ton of iron, while in others it varies, according to the admixture of the ores, from 38 to 41, 44, and 47 cwts. to the ton of pig-iron. Having carefully considered a large number of examples, the average consumption of ore to metal may be taken as 40 cwts. 1 qr. to each statute ton. In the year 1873 the total quantity of ores of all kinds employed in this district in the manufacture of 424,384 tons of pig-iron amounted to 854,171 tons. It has not been found practicable to ascertain the exact quantities of each kind of ore used; the following, however, shows approximately the source of supply:

Argillaceous ores ("Native Mine")	Tons 248,777
Foreign ores (ascertained)	155,082
Various (British and Foreign)	450,312
Total	854,171

Of the "various" (British and foreign) ores used, there is good reason for assuming that the great bulk is derived from foreign countries, from 20 to 25 per cent. being furnished by our own iron districts.

COAL USED IN THE MANUFACTURE OF PIG-IRON.—We have no very early information bearing on this important subject: about the year 1830, however, it was ascertained that 4 tons was the average consumption of coal to each ton of pig-iron made. In south Staffordshire at the same period from 6 to 6½ tons were required, and in Scotland the amount varied from 7½ to 8 tons. We have now a very different state of things, increased economy being secured by the numerous improvements introduced into our blast-furnaces since that date. Thus, taking the year 1872, the pig-iron made amounted to 462,041 tons, the coal employed being 1,172,453 tons, or an average of 50 cwts. of coal to each ton of iron made, while in the year 1874 the 424,384 tons of pig-iron consumed in its manufacture 1,047,360 tons of coal, showing a slightly increased economy, the average being 49 cwts. This average includes all purposes where heat is required, and the economy attained by the utilisation of the waste gases in

considerable in those works where such saving apparatus is employed. The total amount of pig-iron made in Great Britain in the year 1873 was 6,566,451 tons, consuming in its production 16,718,532 tons of coal, and in the year 1874, from returns recently published, 5,991,408 tons of pig-iron, consuming in its manufacture 15,292,201 tons of coal, or an average in each year of 51 cwts. of coal to each ton of pig-iron made; and it should be observed that in all cases in which coke has been given it has been computed as coal.

MILLS, FORGES, AND BESSEMER STEELWORKS.—The malleable ironworks of Glamorganshire, 17 in number, possess in the aggregate 543 puddling furnaces, and 96 rolling mills, of which the Dowlais Works are the most extensive, numbering 130 puddling-furnaces and 14 rolling mills, in addition to which the same company possess an extensive steelworks, where the manufacture of steel is carried on by the process invented by Mr. H. Bessemer. These Bessemer works commenced operations in the year 1865, and consist of six 5-ton convertors, with the necessary blowing and hydraulic machinery; in addition to which are four furnaces constructed on the system of Siemens-Martin, and two in course of erection. The steel made by the Siemens-Martin process is employed for all purposes to which soft steel is ordinarily applied. In England it is used for casting screw-propellers, and for various other high class steel castings. At the celebrated French works, at Creusot, steel containing 10 per cent. of carbon is manufactured by this process, and is used for piston-rods and other parts of steam-engines, boiler plates, and more recently for shipbuilding. These steelworks at Dowlais, when in full operation, produce 1500 tons of steel per week, the trade consisting principally of railway bars and fastenings.

The Landore Siemens Steelworks, situated at Landore, near Swansea, is another extensive and important establishment; the works possess two blast-furnaces, capable when at work of producing 600 tons of pig-iron per week; 24 Siemens regenerative steel-melting furnaces, with the requisite gas producers, each furnace making, on an average, 65 tons of steel weekly. The rail mills of these works are capable of making 1300 tons of finished rails per week. The works, in addition to their other resources, have 64 steam-engines of all sizes at work and five locomotives, and when in full operation employ 2000 men. In the year 1873 the mills and forges in Glamorganshire possessed the following resources for manufacture:—

No.	Name of works.	Name of firm.	Nearest port or railway station.	Pud. fur.	Rolling mills.
1.	Amman	Amman Iron Company	Llanelly	9	3
2.	Margam	Robt. B. Byass and Co.	Aberavon	—	6
3.	New Clydach	John Jayne	Abergavenny	12	1
4.	Gadly's	Wayne's Merthyr Steam Coal and Ironworks Company (L.)	Aberdare	15	2
5.	Llynvi	Llynvi, Tondu, and Ogmore Coal and Iron Company	Bridgend	33	4
6.	Abernant, Taff Vale, and Lewydcoed	Aberdare Iron Company	Aberdare	50	5
7.	Aberaman	Powell Duffryn Steam Coal Company (Limited)	Cardiff	16	1
8.	Melin Griffith & Pentyrch	T. W. Booker and Co.	ditto	7*	12
9.	Penydarren	Fothergill and Hankey	ditto	12	0
10.	Treforest	Lewis, Morgans, and Evans	ditto	6	5
11.	Briton Ferry	Townsend, Wood, and Co.	Briton Ferry	42	4
12.	Cyfarthfa	Robert Crawshay	MerthyrTydfil	72	6
13.	Dowlais	Dowlais Iron Company	ditto	130	14
14.	Plymouth & Duffryn	Fothergill, Hankey, and Bateman	ditto	46	7
15.	Cwm Avon, Taibach	Governor and Company of Copper Miners	Port Talbot	29	7
16.	Ystalyfera	Ystalyfera Iron Company	Swansea	42	16
17.	Tondu	Llynvi, Tondu, and Ogmore Coal and Iron Company	Tondu	22	3
	Total of Glamorganshire			543	96

* Four double and three single furnaces.

COAL USED IN MILLS AND FORGES AND BESSEMER WORKS.—The total quantity of coal employed in the various branches of manufacture in these extensive works in the years 1872 and 1873, including coal used in the tin-plate manufacture, was not less than 750,000 or 800,000 tons; and we strongly incline to the opinion that the last-named quantity is somewhat understated. The above-noted quantities would give an average consumption of coal in the mills and forges of Glamorganshire of nearly 1200 tons per annum, and this is fairly reliable, as a competent authority connected with these industries has given it as his opinion that an average puddling-furnace will consume from 1200 to 1300 tons of coal per annum in the manufacture of 500 tons of bars or rails, it being also generally regarded that from 5 to 5½ tons of coal is the average quantity required to bring each ton of bars and rails into their manufactured state.

TIN-PLATE MANUFACTURE.—Glamorganshire has long been celebrated for the superior quality of its tin, terne, and black plates in the manufacture of which the best pig-iron is employed; this is composed of "Native Mine" and hematite, reduced either with anthracite or coke, and blown by cold blast; great care is taken in the course of manufacture to ascertain that none of the plates from which the finished sheet is made are below a certain standard, and that they possess the well-known crystalline structure and grain which experience has shown best ensures strength. The tin-plate works of Glamorganshire number 23, and in the year 1873 produced one-half of all the number of boxes of tin-plates made in the 66 works in Great Britain. The works of Ystalyfera, Landore, Cwm Avon, Melyn, and Vernon may be named as a few of the most extensive. The works of this district, when fully employed, are capable of producing nearly 2,000,000 boxes per annum, but the ascertained number in the year 1873 did not exceed 1,345,620 boxes. The following is a list of the works in the year 1873, with the names of owners, &c.:—

Name of works.	Name of firm.	Where situate.
Aberdulais	Joshua Williams and Co.	Neath.
Amman	Amman Iron Co.	Swansea.
Avon Vale	Port Talbot Tin-Plate Co.	Aberavon, Talbach.
Beaufort	Beaufort Tin-Plate Co.	Morriston, Swansea.
Cwm Avon	Governor and Company Copper Mines	Taibach.
Cwmbwrla	Swansea Tin-Plate Co.	Swansea.
Cwmfelin	Cwmfelin Tin-Plate Co.	Swansea.
Dyffryn	Davies, Evans, and Co.	Morriston, Swansea.
Gadly's Uchaf	Smith and Davis	Aberdare.
Gower	H. Ll. Morris and Co.	Penclawdd.
Landore	Landore Tin Plate Co.	Swansea.
Llwydarth	Llwydarth Tin-Plate Co.	Maesteg, Bridgend.
Melyn	Leach, Flower, and Co.	Neath.
Morriston	Morriston Tin-Plate Co.	Swansea.
Pentyrch and Melin Griffith	T. W. Booker and Co. (Limited)	Cardiff.
Pontardawe	W. Gilbertson and Co.	Swansea.
The Forest	The Forest Tin-Plate Co.	Morriston, Swansea.
Treforest	Treforest Tin-Plate Co.	Pontypridd.
Upper Forest	Edward Bagot and Co.	Swansea.
Vernon	David Morris and Co.	Briton Ferry.
Worcester	Llansamlet Tin-Plate Co.	Middle Forest.
Ynispenllwch	Ynispenllwch Tin-Plate Co.	Swansea.
Ystalyfera	Ystalyfera Iron Co.	Swansea.

The above-named works produced in 1873, as previously stated, 1,345,620 boxes of tin, terne, and black plates, giving a total estimated weight of 82,297 tons, while in Great Britain in the same year the total yield reached an aggregate of 2,685,045 boxes, of an estimated weight of 165,000 tons, the production in the year 1874 amounting to 2,529,563 boxes. For comparison, we note the production of Great Britain since the year 1870:—

Year.	Tin-plate. Number of boxes.	Year.	Tin-plate. Number of boxes.
1870	3,459,782	1872	2,977,851
1871	2,393,291	1873	2,685,045

The great bulk of production of tin-plate is exported to the United States of America, which received the following number of boxes in each of the years named, while side by side is noted the total exports from Great Britain:—

Year.	United States of America. Number of boxes.	Total exports. Number of boxes.
1872	1,531,356	2,083,451
1873	1,511,632	2,153,477
1874	1,585,994	2,143,468

Of the tin-plate exported in the years 1873 and 1874 the following statement shows the number of boxes shipped from the various ports of Great Britain:—

Ports.	1873.—Number of boxes.	1874.—Number of boxes.
Liverpool	1,585,012	1,497,444
London	251,806	231,362
Southampton	117,010	107,087
Swansea	73,077	41,456
Hull	12,560	19,562
Glasgow	8,059	4,128
Newcastle	613	1,808
Bristol	63,392	110,471
Cardiff	41,948	130,224
Total boxes	2,153,477	2,143,468

The Board of Trade returns show the total weight in tons of tin-plates exported of all kind in each of the years since 1872 to have been as follows, distinguishing the countries receiving the principal quantities:—

Countries to which exported.	Quantities. 1872.	1873.	1874.
France	Tons 3,342	Tons 3,983	Tons 2,350
United States	87,360	85,527	91,424
British North America	4,003	3,338	3,516
Australia	5,094	4,526	2,595
Other countries	18,284	23,264	22,898
Total exports	118,083	120,638	122,783
Total value	£3,806,973	£3,953,042	£3,715,543

The commercial reports of the year just closed exhibit generally, as regards our iron industries, a great depression of trade; this was especially the condition of the various branches of the coal and iron industries of Glamorganshire; indeed, it is stated as a matter of fact, and quite reliable, that many of the ironworks of this district have been carrying on business during the past year with little or no profit.

In our next notice we propose considering the progress of the pig-iron manufacture in those districts in which anthracite is exclusively employed in the counties of Brecknock, Carmarthen, and Glamorgan.

Meetings of Public Companies.

GORSEDDA JUNCTION AND PORTMADOC RAILWAYS COMPANY.

A special general meeting of shareholders was held at the company's offices, St. Clement's House, yesterday, to submit to the proprietors a Bill now before Parliament intituled "A Bill to enable the Gorsedda Junction and Portmadoc Railways Company to maintain two existing diverted portions of railway in the parishes of Ynyscynhaiarn and Llanfihangel-y-Pennant, in the county of Carnarvon, and to make a siding in the said parish of Ynyscynhaiarn, and to raise further capital, and for other purposes,"

Mr. JAMES STEWART in the chair.

Mr. G. J. GRAY (the secretary) having read the notice convening the meeting,

The CHAIRMAN declared the meeting duly constituted; and the secretary having read the heads of the Bill, the CHAIRMAN addressed the meeting, and concluded by moving "That the Bill be approved of." The resolution was seconded by Mr. C. W. SLEE, and carried unanimously.

A discussion then ensued as to the financial position of the company, and the shareholders present promised to find 1000*l.* towards the amount required by the company, on the understanding that the balance would be found by the other shareholders.

The meeting concluded with the usual vote of thanks to the Chairman.

ENGLISH AND AUSTRALIAN COPPER COMPANY.

At the general meeting on Thursday next the directors' report will state that the gross quantity of ore, regulus, precipitate, &c., received from various mines during the year ending June 30, 1875, was 12,249 tons 8¾ cwts., against 13,627 tons 14 cwts. in the preceding 12 months. During the year there was smelted at the Port Adelaide Works 7452 tons 2¾ cwts. of ore, against 6874 tons 2 cwts. in the preceding year. At the Newcastle works they smelted 5244⅔ tons. In the year ending June, 1875, the copper made was 1938⅓ tons at Adelaide, and 730 tons at Newcastle, against 2071⅓ at Adelaide in the preceding year. The quantity of copper shipped from and sold in Australia during the year ending June 30 last was:—

	1874-75. Tons	c.	qr.	lbs.	1873-74. Tons	c.	qr.	lbs.
Shipped from Adelaide	1384	8	2	4	1208	2	3	0
Sold in Adelaide	557	1	1	26	860	0	2	21
Shipped from Newcastle	583	1	0	5	1042	10	2	25
Sold in Newcastle	147	1	1	2	1	5	2	14

The supplies of ore, &c., show a decrease of 1378 tons compared with those of the previous year, chiefly occasioned by the cessation of several special contracts with mines which were entered into for short periods only. The manager, however, reports that in spite of fluctuations, and of some of the mines delivering smaller quantities, there are other mines to take their places, and, upon the whole, they are constantly increasing their sources of supply. During the four months since the date of closing these accounts the total purchases of ore, regulus, and rough copper amount to 5440 tons; at which rate the annual total will be greatly in advance of previous years.

The quantity of ore received from the Balade Mine, New Caledonia, during the year was greatly in excess of the previous year, and since the accounts were made up 596 tons had been received, and another large shipment was on the way to Newcastle. It was expected that the quantity for the six months following June 30 would be equal to the whole of the year under review, and that the next half-year would be greatly in excess. The quantity of ore from the Burra Burra Mine shows a slight decrease in weight; but the average percentage had risen from 18¼ per cent. to 20¾ per cent., so that the copper contents show an increase. Since that period it had improved to 24½ per cent. The operations for draining and developing this mine were being pushed forward with all activity. It was hoped they would lead to valuable discoveries of ore, and our manager looked for a considerably increased supply from the mine. The mines in the Far North were yielding but small quantities of ore, there being throughout that rich district quite a lull of suspense pending the result of the South Australian Government Railway policy. Should this be carried out, and the railways constructed, the whole of the North would wake into activity, and they would get large quantities of ore most suitable for their Port Adelaide Smelting Works. The supplies of coal to the Newcastle Works had been full and regular, and the New South Wales Government were taking active steps to remedy deficiency of wharfage accommodation at the port.

The earnings of the company's wharf at Port Adelaide for the year have been greater than in any previous year, being 376*l.* 8s. 4d. The extension of the railway to a junction with the rails on the wharf, mentioned in last report, had been completed at the Government expense.

The copper market during the year showed an absence of speculative dealing, and the combined effect of diminished exports and increased imports was neutralised in a very great degree by the increased demand for home manufactures. The profit and loss account for the year ending June 30, 1875, shows a balance at the credit of 13,847*l.* 10s. 6d., to which has to be added 11,065*l.* 9s. 6d., balance of profit on July 1, 1874, making together the sum of 24,913*l.* 0s. 3d. Out of this amount the 24th dividend of 2s. per share has been paid, with the usual addition of 10 per cent. to the reserve fund, leaving at the credit of profit and loss on July 1, 1875, the sum of 16,838*l.* 0s. 3d. In September, 1875, the 25th dividend of 2s. per share was paid, with 10 per cent. added to reserve fund; and the directors now recommend a dividend of 2s. per share—making 4s. per share for the year, with 10 per cent. added to reserve fund. The profit for the year under review has been affected by several special causes of a temporary but unavoidable character. First, by the falling off in the supplies of ore; and, next, by the cost of repairs to furnaces both at Port Adelaide and at Newcastle. The cost has been rendered unusually heavy by the high rate of wages, the difficulty in procuring labour, the dearness of materials, and the rebuilding of two of the furnaces at Newcastle—all of which has been borne by the revenue of the year. The outlay, however, has put the smelting works at both places into the most efficient state. The reserve fund now stands, with interest to close of past year, at 11,944*l.* 8s. 1d., secured by copper warrants.

[For remainder of Meetings see to-day's Supplement.]

FOREIGN MINES.

PORT PHILLIP AND COLONIAL (Gold).—Telegram received dated Melbourne the 10th inst.: Month ending Jan. 26, yield per ton, 5 dwts. 8 grs.; western reef, 4 dwts. 13 grs. per ton; new eastern, 6 dwts. per ton. Accounts balance. Resumed sinking.

OREGON HYDRAULIC (Gold).—J. E. Bowe, Jan. 14: Since my last to you I have been to the mines, arriving there on the 6th; and I found that Rogue River had been so high that it had prevented the pack-train from running from Dec. 24 till the day after I arrived. I was the first person that took a horse in from the time I came out on the 23rd till I went back on the 6th of this month, so the iron to complete the 800 ft. of pipe for the Thoss Claim did not all get in till the 8th. I have just received a note from Ennis, saying that the pipe for the Thoss will be finished and ready to lay by the close of this week, this being Friday, the 14th; so you see we are, despite rain and storm, making some progress. They had not got in any more boxes of tail flume when I left—was still running through the seven boxes. They commenced running night and day on Dec. 26, without quicksilver, and made the first clean-up on the 4th inst.; and from the showing of black sand and gold obtained there is no longer any question about results. It could not be fanned out from the black sand without a great deal of trouble till we got some quicksilver, which is now on the ground. The showing of gold in the black sand was considered perfectly satisfactory to Mr. Ennis and Mr. Moller, the latter being the foreman of the Thoss Claim. They are both old and experienced miners, and are better judges than I am of the satisfactory showing for the time run. They evidently lost more than half of the gold, as there was just as much gold in the last box as there was in the first. The gold is quite coarse, and much brighter than I expected from what I had been led to believe; there is scarcely a doubt but what quicksilver will take it up readily. What gold we have decomposed over the precipice we will collect some day. We have to run off the dirt to form dams below to get in more tail flume. Your directors were kind enough to congratulate me on the progress made, after you received my last wire. I now congratulate them, through you, that there is no longer any question as to the great value of their property.

EXCHEQUER.—On Wednesday the lode was cut at the 300 ft. level, 26 ft. from the shaft. The ore is very rich, and a good ledge in sight. A large body of water was struck. A 2 ft. vein of light and dark ruby quartz and clay was struck a few days since in the 140 ft. (winze) level, which assays from $500 to $10,000 per ton. A new contract has been let to run on the lode, and more force is to be added. About 100 men will be employed at the mine, and from 25 to 30 at the quartz and saw mill, next spring.—*Alpine Chronicle*, Jan. 15.

For remainder of Foreign Mines, see to day's Supplement.]

CHAPEL HOUSE COLLIERY.

We hear that the 7½ per cent. debentures are being well taken up, chiefly by shareholders and their friends, who thus evince their confidence in the value of this property and in its working and management. This confidence appears to be well founded when it is considered that profits to the extent of some 40,000*l.* have been made at the colliery in about two years, embracing a period of extraordinary stagnation in the coal trade, and signalised by great and prolonged disturbances in the labour market. When the last balance-sheet was published, after paying quarterly dividends of 15 per cent. per annum, a sum of over 11,000*l.* of undivided profits was carried forward to the next account.

At the meeting at which this balance sheet was submitted to the shareholders, it was proposed by the executive, and warmly approved, that, in order to increase the profits in reserve, and to add to the stability of the company, future dividends should be confined to a more moderate rate, and in accordance with this prudent resolve the quarterly dividends from then up to the present time have been at the rate of 10 per cent. per annum. While paying these satisfactory dividends the future welfare of the company has been kept constantly in view, and new works of a costly and massive description have been carried on, and are rapidly approaching completion, with the object of increasing the output from the present average of about 300 tons to 1000 tons per day.

Extraordinarily rapid progress has been made with these works, and it is anticipated that they can be finished during the present year, when the large increase in the output of coal will enable the colliery to make very greatly augmented profits. The present issue of debentures is for the purpose of assisting to meet the large outlay necessary for these works, and as the proceeds of the debenture issue are invested in improving the value of an already very valuable property, so will the already excellent security for the debentures be increased.

In every way, therefore, these debentures appear to form a very eligible investment, and the past history of the company proves that the management has been carried on with a conscientious anxiety to merit the confidence which has been so largely, and will, no doubt, continue to be, bestowed upon it.

THE VAN MINES—MONTHLY REPORT.

Feb. 10.—Seaham's shaft is completed to a depth of 3 fms. below the 105; the lift of pumps has been fixed, and we have commenced driving the 105 cross-cut north for the lode, which is set to six men, at 20*s.* per fathom. The 90, west of shaft, is extended 34½ fms., worth for lead ore 60*l.* per cubic fathom; set to six men, at 22*s.* per fathom. The same level, east of shaft, is driven 17½ fms., worth 40*l.* per cubic fathom for lead ore; set to six men, at 23*s.* per fathom. The 75, west of shaft, is extended 73 fms.; this end is worth at present 50*l.* per cubic fm. The great course of ore has gone into the hanging, whereas we are driving the level upon the footwall, but in stripping the lode to full width we shall have it again. The 75, driving in the soft by the side of the lode, has been extended 7 fms. west of the 60 winze, and is set to six men, at 70*s.* per fathom; the object of this driving is to furnish stuff for filling up stopes, and also to communicate with the 90 winze at the earliest possible moment, when we shall cross north to prove the value of the lode, and drive westward along its course, as we did in the levels above, and which will enable us to save about six months' time in developing this section of ground. The winze sinking below the 75, at a point 40 fms. west of shaft, is down 9½ fms., and is worth for lead ore 50*l.* per cubic fathom; set to six men, at 28*s.* per fathom. The stripping of the lode to full width in the side of the 75, at a point 65 fms. west of shaft, is set to eight men, at 80*s.* per fathom; the lode here is worth for lead ore 100*l.* per cubic fathom. The same, at a point 60 fms. west of shaft, is set to eight men, at 80*s.* per fathom. The 20 fm. stope, in the back of the 75, west of shaft, is set to six men, at 60*s.* per fathom. The lode at these two points is worth on the average 45*l.* per cubic fathom for lead ore; average width, 15 ft. The winze sinking below the 75, east of shaft, is deep enough for the 90. The 75, east of shaft, has not been taken as yet, but will probably be taken in a few days.

The 60, west of shaft, is extended 137½ fms. We have crossed 3 fms. north at this end; the lode is 5 ft. wide, and is worth for lead and blende 12*l.* per cubic fm.; set to four men, at 70*s.* per fathom. The 90 winze, sinking below this level, on the south side of the lode, is down 7½ fms.; set to six men, at 150*s.* per fathom. The stopes in the back of this level are set as follows:—The 115 west, to eight men, at 65*s.* per fathom. The 100 west, to eight men, at 65*s.* The 90 west, to eight men, at 70*s.* The 72 west, to eight men, at 70*s.* The 64 west, to eight men, at 70*s.* The 56 west, to eight men, at 80*s.* The 48 west, to eight men, at 80*s.* The 40 west, to eight men, at 70*s.* The 32 west, to eight men, at 75*s.* The 24 west, to six men, at 75*s.* The 16 west, to eight men, at 70*s.* The 8 east, to eight men, at 75*s.* The 16 east, to eight men, at 70*s.* The 24 east, to six men, at 70*s.* The 40 east, to eight men, at 80*s.* These stopes will average 16½ ft. wide, and worth 27*l.* 10*s.* per cubic fathom for lead ore.

The 60, east of shaft, is set to six men, to drive in the soft by the side of the lode, at 70*s.* per fathom. The 45 permanent level west is set to four men, at 100*s.* per fathom. The same level, east of shaft, is set to four men, at 100*s.* per fathom. I have set to four men to sink a winze at the present end of the 45, east of shaft, for the purpose of ventilating the 60 and forming a pass for transit of stuff to fill up stopes; 15 fms. stent, at 120*s.* per fathom. The stopes in back of the 45 are set as under:—The 54 east, to eight men, at 90*s.* per fathom. The 40 east, to six men, at 90*s.* The 24 east, to four men, at 80*s.* The 16 east, to six men, at 80*s.* The 8 east, to twelve men, at 80*s.* The 60 west, to eight men, at 85*s.* The 70 west, to eight men, at 85*s.* The 80 west, to four men, at 75*s.* The 90 west, to eight men, at 70*s.* These stopes will average 17 ft. wide, and are worth for lead ore 26*l.* per cubic fm. The rise under Edwards's shrft, from the 40, is communicated with the 30, and the men have continued the same 5 fms. in the back of the 30, in order to communicate with the cross-cut from Edwards's shaft; set to six men, at 100*s.* The stope in back of the adit, east of shaft, is worth for lead ore 17*l.* per cubic fathom—width 8 ft.; set to six men, at 75*s.* per fathom. At a point about 54 fms. east of shaft, in the 15, I have put two men to drive a cross-cut north into the lode to prove its value, at 240*s.* per fathom; good stones of ore are met with at times.

Surface: We are progressing with the excavations for the foundations of the 70-in. pumping-engine at Seaham's shaft, and are also raising stones for the purpose. We have commenced building the new storehouse. The six cottages will be ready for inhabiting early in March. All machinery is in good working order. Our four-weekly sale takes place this day, upon 500 tons of lead ore and 250 tons of blende.—W. WILLIAMS.

MINING NOTABILIA

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

EAST CARADON.—It is reported in the district that since the improvement the caunter lode in the 130 has fallen off considerably in value, and that the mine is very poor, having come into an elvan course, which will take a long time to get through. Unless some improvement takes place the balance appearing in favour of the adventurers at the last meeting will probably be more than absorbed by the 13th month, and if they are not able to increase the returns or make some discovery the shareholders must look forward to calls. It is a great pity that the shaft had not been sunk so as to have developed the mine. It is very desirable that the agents' report should appear regularly in the Journal, for general and trustworthy information.

LLANRWST requires no comment, read the Agents report in another column. The property is out of the category of speculation, is one of great success, and the fact that the number of mining grants applied for wherever a plot of mineral ground can be had surrounding it. A number of applications have been made, thus not only giving life and vitality to the district, but showing the reputation in which the Llanrwst mine proper is held.

BAMPFYLDE is doubtless one of the greatest mineral properties, taking it for copper, iron, and manganese, ever known in Devonshire. Its predecessor—the Devon Consols—was one of the most productive and profitable mines ever opened in England, and there is no reason why, from the variety of minerals, the number of lodes, copper, iron, and manganese, and their prolific character, that this mine should not turn out equally valuable and productive. The telegram just received states a great improvement in 11*l* for copper.

ABERDAUNANT.—The fact of the Van proving so rich in ore and dividends has proved a guarantee to the development of the East Van. Great credit is due to Capt. Williams, the manager, and his mineralogical judgment should command the support of the mining interest generally as an authority for the mineral lodes of the district. The Aberdaunant Mine has been showing favourable signs of success, and more and more as development has gone on, sinking upon the same great Van lode, from which they has been sending their several parcels of ore into market; and it is believed they have only to sink about 12 fms. deeper to be at an equal depth on the same gigantic Van lode with the Van, when they will be enabled to commence sales at the rate of 700 tons of ore per month, and at the present depth of the East Van, where it is out rich and estimated at 150*l.* per fathom. In all probability the Aberdaunant will cut equally rich, and will be the next great great prize in the Van district. This opinion is supported from the numerous applications for shares direct from the district.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Feb. 9: In No. 1 adit level, driving east, the men are still engaged in blasting down the productive part of the lode. There is no change to notice since last week. The lode in the forebreast is still worth 6*l.* per fathom for lead.

AMBROSE LAKE.—P. Temby, Feb. 2: We have completed the kilns and arsenic chambers, which are producing about 8 tons of arsenic per month, and have commenced to stamp the stuff that has passed through the kilns for tin. We shall sample this week about 30 tons of copper ore, of a much better quality than the last sold. At the bottom level, on the north lode, we are driving east and west, and laying open some good ground for copper and mundic. The lode in the east end is from 3 to 4 ft. wide, prodncing about 2 tons of ore per fathom. In the end west the lode is improving, and is now 15 in. wide, producing 2½ tons per fathom; here we are daily expecting to meet with a cross-course. We have one stope working in the back of this level, of much the same value as when last reported on. On the middle lode we are only driving one end east; the lode for the last few feet has been disordered by a slide; it is about 16in. wide, mixed with copper, mundic, blende, and quartz. In the back of this level we have one stope where the lode is 1 ft. wide, almost solid copper ore, worth, I consider, 2½ tons per fathom. We intend to commence to drive west on this lode next week: we should have done it before, but have been busy getting up the ore for sampling. We have seen enough of these lodes to warrant us in going deeper, and I would recommend pushing out the bottom cross-cut as fast as possible from the engine-shaft, so as to see these lodes 12 or 14 fms. deeper. Three or four months' driving, with six men, would reach them, when we should have two levels to work in; and I have every reason to believe we should have a better lode of copper. Where we have now got it is at just the same level as it was first cut in Wheal Sisters and Tin Valley Mines.

ASSHETON AND WEST ASSHETON.—J. Craze, Feb. 9: Boundary shaft, sinking below the 50, is set to nine men, at 14*l.* per fathom; ground favourable for progress. The 50 cross-cut is set to four men, at 6*l.* per fathom; the 40 ditto, to two men, at 5*l.* per fathom. We are now engaged fixing pulley-stand and rods from Boundary to Maur shafts; when this is completed we shall be in course for forking the water from Assheton proper.

BAMPFYLDE.—J. Juleff, H. T. Haley, Feb. 8: The stope in back of the 90, west of No. 4 shaft is worth 10*l.* per fathom, and from the present appearance we believe it will prove a valuable piece of ground. No. 1 stope, in back of the 112, west of No. 4 shaft, is worth 7*l.* per fathom. No. 3 stope, in the back of the 112, west of No. 4 shaft, is worth 15*l.* per fathom, and bids fair to continue of the same value; we purpose putting up a rise in back of this stope to open out a section of ground for another stope. The lode in the 102, west of No. 4 shaft, is worth about 5*l.* per fathom; this end being the furthest west in the mine on this lode, it should be opened out with all possible speed to prove the lode in this direction, and where we think valuable discoveries of copper ore will be met with. In the 112 end, west of No. 4 shaft, the lode is worth 10*l.* per fathom, and judging from the ore ground driven through in the 102 for a great length before this end, we have every reason to expect excellent results at this point, particularly seeing the lode forming more regular, and the ore being of better quality.

BEDFORD UNITED.—Wm. Phillips, Feb. 10: Most of our operations at present are by the side of the lode, so that there is very little change to notice to day.

BELSTONE.—James Neill, Feb. 5: A Shaft: In the 80 cross-cut south, on cross-course, the total distance from shaft is 9 fms. 5 ft. 5 in.; the stratum is a little easier for progress, and still maintains its mineralised character: it has been reset to day to six miners, stented the ensuing four weeks, at 9*l.* 10*s.* per fathom.—C Shaft: The stopes east and west from rise, in back of cross-cut north, on No. 2 cross-course, at the 40 east, are much the same in appearance as last reported, and quite as productive. The cross-cut on No. 2 cross-course, from stopes on south part of lode above the 40 east, is being driven north, and is 3 fms. above the highest point of productive stope, and when driven north, so as to be perpendicular over the productive stope, I intend to hole this stope with cross-cut, and when communicated will give good ventilation to each point, and facilitate the stoping; the ground in the cross cut is very congenial, with small nests of ore I expect very soon to meet with the same productive runs of ore ground as in the stope below.

CALDBECK FELLS.—J. Polglase, Feb. 4: The lode in 90 west, on main lode, during the past month has yielded about 10 cwts. of lead per fathom. At present the end is harder than usual, and not quite so good for lead. The 90 end west, on Silver Gill lode, is favourable for driving. The stopes in the back of the 80 are not so productive as usual. The lode is passing through a change of ground, which is met with occasionally in this direction.

CARGOLL.—J. Jennings, Feb. 9: There is no particular change in the mine since the last account-day, except the 11 east is now within 5 fms. of Bowyer's shaft, and when reached I shall at once begin to rise against it. I may further add that I am making preparations for sinking the said shaft below the adit level, when I hope to communicate in a few weeks.

CATHEDRAL.—Joseph Mitchell, Feb. 10: The lode continues to open out well in the engine-shaft. The valuation as last reported, and gradually improving as we deepen the same. Everything is in favour of a great course of copper ore.

CENTRAL VAN.—Henry Francis, Feb. 5: Since my report of Jan 27 we have made rapid progress for sinking in No. 2 cannter lode, the lodge or plat cutting out of the west side of the level being nearly completed. In cutting this lodge we have met with some new crystallised spar, with spots of copper ore in it. The No. 2 level, or caunter lode, is also progressing favourably, and looks promising. The lode coutains carbonate of lime, some blende ore, and now and then spots of lead ore.

CREVER AND WHEAL ABRAHAM UNITED.—W. Thomas, S. Arthur, Feb. 9: Being fully persuaded that the main part of the lode was standing to the south at the 220, west of Woolf's shaft, we placed Sturt's shaftmen to drive south. In driving south 6½ ft. we cut what we consider to be the main part of the lode last night. We have examined it to-day, and have cut into it 2½ ft. and not yet reached the south wall; the part, as far as seen, will yield 3 tons of good copper ore per fathom, or 20*l.* We shall be able to report more fully on it in a day or two. We have placed Willyam's shaftmen to drive south west of the cross-course at the 208 fm. level, at Woolf's shaft, in order to cut it at that point. We consider this a good discovery.

CWM DWYFOR.—Capt. Jewell, Feb. 10: Underground operations are progressing satisfactorily. We expect the crushing machinery early next week.

CWM ELAN (NEW).—W. Goldsworthy, Feb. 5: In the 30 east of shaft, on the south lode, we have cut through a small cross course, about 1 ft. wide, which has heaved the lode a little out of its course; still the lode is looking well in the present forebreast; this cross course is not seen in the levels above. The men in the cross-cut have not yet cut through the north lode as expected, and we are still cross-cutting in the same direction. There is no change to notice in any other part of the mine.

CWMYSTWITH.—Feb. 3: In Michell's level, west on the new lode, the lode is 2 ft. wide, composed of clay-slate, with blende and lead ore; saving work for dressing, and kindly for an improvement. In Michell's level, east on the new lode, the lode is still 5 ft. wide; worth 12 cwt. of lead ore per fathom. In Gill's upper level cross cut north the ground is stiff for driving. In the Rosa cross-cut north the ground is favourable for driving. The rise, stopes, and tribute pitches are producing about the same quantity of ore as for some time past. All our machinery is in fair working order.

DENBIGHSHIRE CONSOLIDATED.—J. Pryor, Feb. 10: I have sent per post this evening specimens of the soils which we are now in at Parry's lode west; these specimens come from the bottom of the level in the forebreast, the grey shale is, if examined, mixed with small specks of lead; the yellow specimen came from underneath the former, and both are now to be seen in the forebreast; in my opinion never did the mine look so promising. In the 112 east there is no change as regards lead, but the alteration in the ground is very evident. In the 112 west proper the lode is 4 ft. wide, mixed with spar and limestone, and also a little lead. I am very anxious just now expecting daily to send you news of Parry's.

DEVON GREAT CONSOLS.—J. Richards, Feb. 10: Wheal Anna Maria—Engine-shaft: Jeffery's cross cut south, at the 80 fm. level west, has been resumed for the purpose of intersecting the new south lode, there being a long range of unexplored ground both to the east and west thereof. The ground is favourable for progress.—Wheal Josiah—Richards's Engine Shaft: In this shaft, which is now sinking for greater speed by the side of the lode below the 260, the ground continues favourable for progress. In the 60 west the lode is 3 ft. wide, and worth ½ ton of ore or 4*l.* per fathom.—Agnes's Engine-shaft: Veal's cross-cut south, at the 144 west, has been resumed, in which the ground is favourable for progress. This cross-cut has been driven with a view of intersecting the new south lode immediately under the new south lode shaft, which is down to the depth of the 130. On reaching the lode a rise will be put up against the shaft, and when a communication is effected therewith some profitable ground will be laid open.—Wheal Emma—Thomas's Engine-shaft: In the 216 and 145 east we continue to drive by the side of the lode, and favourable progress continues to be made. In Staddon's rise, in the back of the 60 east, the lode is worth 7 tons of ore or 35*l.* per fathom.—New Shaft, New South Lode: In the 160 east 4 ft. of the lode is still being carried, which is worth 8 tons of ore or 24*l.* per fathom. In the 145 east the lode is 5 ft. wide, and worth 7 tons of ore or 28*l.* per fathom. In the 130 east the lode, or part thereof carried, is 3 ft. wide, and worth 4 tons of ore or 12*l.* per fathom. The lode in Welsh's winze being stripped down below the 115 east, is still a good course of ore, worth 12 tons or 50*l.* per fathom.

DYLIFFE.—E. Rogers, Feb. 9: Dyliffe Lode: In stripping down the side of the level at the 120, east of boundary shaft, the lode has a very promising appearance, worth about 9*l.* or 10*l.* per fathom. The other parts of the mine are of just the same value as named in last report. The tributers are making wages at their respective bargains.

DUBBY SYKE.—Wm. Tallentire, Feb. 4: The Dubby Syke level is open about 30 fms. forward from where we now are; some parts are rather crushed in, and will want repairing. The vein in Shooting box level is still encouraging—there is no change west; the men have been engaged repairing the level this week, but will resume work on Monday. The vein east looks very favourable for bearing lead ore. I think it cannot but be productive soon, everything desirable in it but lead: there is a kindly looking strong rider at the bottom, and a good deal of soft ferruginous mineral. We have driven in this direction about 3 fms., and are about 50 fms. from where the old men raised lead ore on the surface. I like the change exceedingly well.

EAST BASSET.—Richard Pryor, Edward Adams, Feb. 9: The lode in the 40, east of cross cut, is much the same as when last reported on, being worth about 15*l.* per fathom for copper ore. All other places remain without change to report.

EAST CARADON.—James Kellow, T. Trelease, Feb. 9: Caunter Lode: In the 130 east the lode is worth 5*l.* per fathom. We are making fair progress in sinking the winze below the 115.—Child's Lode, in the 130 east, is composed of friable quartz, peach, and mundic, spotted with ore. No change to notice in the drivages on Marke's lode.

EAST VAN.—W. Williams, Feb. 10: The new shaft is in full course of sinking, and is down 12 fms. 3 ft. I have let a stent of 4 fms. to the men, at 30.0s. per fathom. I think by the time they sink these 4 fms. the ground will have become much more favourable, and possibly the water will be drained off, when I shall set them a bargain to sink to the 25 below the adit (or 70 fms. from the surface). The cross cut at the extreme west end of the 25 has been driven into the lode 6¼ fms. We have cut a joint in the end of the cross cut, but I am not satisfied as to its being the footwall, as there is lead to be seen to the north of it. I fear doing much at this point just now lest we should cut into a heavy feed of water and get drowned out, because I am anxious to see the lode in the cross cut, 20 fms. eastward, which we are now driving. The first of these we shall designate cross cut A, and the other cross-cut B. I value the lode for its width in cross-cut A at 18*l.* per fathom. The cross cut B has been driven 2 fms. towards the lode; judging from, and comparing the joints of the lode in cross-cut A, it seems likely that we have about 3 fms. more to cross in cross-cut B before we intersect the lode. This is a very important point to prove, and when proved will enable us to see our position and decide as to the future mode of development. I have no doubt that many shareholders will wait in anxious suspense for this event, but I may venture to say that I expect nothing less than a productive lode here again, and I am encouraged to say this by seeing spots of lead and damp ground on the end to-day. After this point has been tried, as I said before, I shall be able to speak much more definitely upon the future prospects of the mine, which I think will be very cheering to every shareholder. I have ordered the pumping gear, which is promised us at the earliest possible moment. The cage, trams, &c, have also been ordered.

EAST WHEAL LOVELL.—R. Quentrall, Feb. 9: In the new shaft sinking below the 100 fm. level the lode maintains its size, and is yielding about 2 tons of tin per fathom for length of shaft (12 ft.).

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Feb. 5: The lode in the winze sinking below the 117 is 6 ft. wide, worth 10*l.* per fathom. The lode in the stopes in the back of the 117 is worth 15*l.* per fathom. The drivage of the 105 east is continued by the side of the lode. The stope in the bottom of the 105 is worth 8*l.* per fathom. The stope in the back of the same level is worth 7*l.* per fathom. The winze sinking below the 95 is by the side of the lode, and will be continued in the same direction until communicated with the 105. The stope in the back of the 95 is worth 12*l.* per fatnom. The ground in the 82 fm. level cross-cut, going into the north part of the lode, is principally composed of spar and capel, intermixed with mundic and spots of ore. The stope in the bottom of the 82, west of winze, is worth 6*l.* per fathom. The tribute department is without change.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, Feb. 8: The 78 east, on south lode, is being pushed on to the winze before the end as fast as possible. The ground here is favourable, and the part of the lode carried worth 6*l.* per fathom. We shall soon get into a more valuable lode here. East on north part, the ground more favourable, a lode likely to improve; now worth 5*l.* per fathom. Middle level east, worth from 8*l.* to 10*l.* per fathom, but the lode a good deal di-ordered. We are making good progress with the cross-cut from this level west to the North Harvey's on this lode; we have commenced a winze in the 65, just where the cross cut will take it, worth 10*l.* per fathom. Winze in the bottom of the 65 east now worth 5*l.*, just coming down to the ore ground. No other change of importance to notice. The stopes and pitches throughout the mine continue to look very well, varying in value from 10*l.* to 25*l.* per fathom. We are pushing on the work at the new shaft with as little delay as possible. We sampled yesterday, computed, 250 tons of ore, which will be sold on the 17th inst.

GLYN.—James Roach, Feb. 10: The 15 cross cut has been driven through the lode, which is 41 ft. wide. I expect to communicate the winze sunk under the adit with this level in two or three days, when I shall at once take steps to deepen the engine-shaft 15 fms. About the early part of next week I shall commence driving on the ore bearing part of lode east and west of cross-cut.

GOGINAN AND LEVEL NEWYD.—Feb. 8: There is no change of importance at these mines since my last report. Both Bryn Pica and the western shafts are being sunk below the 110 at a fair speed, and the lode in the western one continues to produce from 1¼ ton to 1½ ton of silver-lead ore per fathom, now down about 8 fathoms below that level, and Bryn Pica about 7 fathoms below same. The tribute pitches are looking much as usual. The weather continues favourable for all work, and everything is being pushed on vigorously. Our reservoirs are kept well filled with water, and the dressing, &c., is now going on regularly, and fair progress making towards another sampling.

GORSEDD AND MERLLYN CONSOLS.—W. Edwards, Feb. 10: The engine and pithead over the new shaft will be completed next week, when we shall urge on the sinking as fast as we possibly can. Since my last we have sold a small parcel of ore, principally from the quarry, 3 tons 7 cwts., at 14*l.*

GREAT LAXEY.—F. Redditcliffe, Feb 8: Deep Mine: So nearly are the various working places of the same value now as when given a fortnight ago that to give the value to day would be only to repeat what was then stated. The winze sinking below the 190 north is holed to the 200, and by it opened a piece of good average ground for stoping.—Dumbell's: The sh ft is without change. In the 200 end south a small slide recently came in, which made the end look poor, but in opening up the side we find the orey portion of the lode thrown there, which, however, is not sufficiently cut into to allow of giving its value. No. 1 stope, in the roof of the 185 south, is worked up to a nip of poor ground, and the men removed, leaving the ore ground on the other side to be worked from the other direction. A new stope off the winze near the 170 end north is worth 30*l.* per fathom. The 140 end south begins to produce some nice stones of lead. The winze in the 110 north is worth 45*l.* per fathom. In the past week we have changed some 30 fms. of the pumping-rod at the 200, between the engine and Welsh shafts, which was found to be decayed, and also one piece in the engine-shaft, which was seen to be giving way. This is done, and all pitwork and machinery again going on as usual.

GREAT RETALLACK.—J. Harris, Feb. 5: Setting Report: The 45 to drive east of whim shaft, by six men, at 5*l.* per fathom, the month; the leader part of the lode is about 6 ft. wide, and worth fully 5 tons of blende per fathom—a very fine lode. The same level to drive west of whim-shaft, by four men, at 3*l.* 8*s.* per fm., the month; the lode is producing patches of blende, but not enough to value; we have about 3 fms. more to drive to get under the shoot of blende gone below the 40, so I anticipate a change for the better very shortly. A stope above the 45, east of shaft, to four men, at 3*l.* per fathom, the month; the leader part of the lode is about 4 ft. wide, and worth about 5 tons per fathom for 6 ft. long. I also set three pitches on tribute to two men each above the 40, at 30*s.* per ton of best blende, one pitch above the 30, to two men, at 35*s.* per ton, and two pitches above the 20, to two men each, at 35*s.* per ton of best blende, the tributers to pay all cost of making their blende marketable; there is one pitch at the 20 being worked by four men, at 30*s.* per ton, whose contract expires at our next survey, on March 4. I also set all the halvans of the mine to one man, at 14*s.* 4*d.* in 1*l.*, for three months, the halvaner to pay all cost of making his blende marketable, and rendering it f.o.b. at Truro. I am very much pleased to say the bottom part of the mine is looking very well.

GREAT WEST VAN.—W. Bramwell, Feb. 10: We have made good progress sinking Eliza's shaft since last report, the ground being rather more favourable. The 34 north cross cut is being pushed forward as fast as possible, so as to intersect the lode ahead of us, to which the ribs of ore we have met with in driving seem all dipping. The lode in the 46, west of old shaft, continues to open well, and maintain its value—about 1 ton of lead per fathom. We shall now take down the lode, and I will advise you of any change. I am pleased to inform you that there is a decided improvement in the eastern part of the sett, the men having struck into the top of a fine lode, which we shall now open upon. I shall be able to furnish you with details respecting this lode next week. The weather here has been rather rough, and interferes with surface operations.

GREEN HURTH.—Wm. Vipond, Feb. 4: We have cut nothing of importance yet in the cross cut west from the end of No. 1, all is confused, yet the beds are going up rapidly, and one hard post seemingly cut off altogether to day. The rise to the surface is still in plate, and very wet again, now up about 10 fathoms. The stope No. 2, below adit, yields about as usual. The stope in the plate above the adit is gradually getting better, and of more value as we work back to where we had more orey ground below. No change to report from the cross-cut to No. 2 cross vein, or the cross-cut south from the end of the old vein; the latter is going on in a strong north and south vein, but it contains no ore yet. We have sent to Mr. J. Dinning 40 bings 4 cwts. of ore. The dressing is stopped to-day, the ground being covered with snow, and a hard frost. The slater has finished the agent's house, offices, &c., and gone; there is nothing now to prevent the joiner from completing the house. The bargains shall be sent early next week.

GREEN HURTH.—Wm. Vipond, Feb. 7: The cross-cut west from end of No. 1 cross-vein is set to two men to drive at 93*s.* per fathom. Driving from No. 1 to No. 2 cross-vein, is set to two men at 86*s.* per fathom. The rise to surface from new south end is set to four men (8 ft. by 4 ft. wide), partition and ladder way to put in at 138*s.* per fathom. The stope in plate above adit is set to two men, at 37*s.* per fathom. The cross-cut south, on north and south vein, from end of old vein, is set to two men to drive at 67*s.* per fathom. We are quite unable to dress lead ore at present, owing to severe frost; we have a little snow, but very little.

HARWOOD.—Wm. Tallentire, Feb. 4: We are pushing the Hardship level forward with all speed—the beds are slightly dipping. I do not see much change in the vein to call for remark; we have been taking down the roof this week. Where we expect to raise ore is at a higher course, and we shall see that part next week.

HINGSTON DOWN CONSOLS.—James Richards, Feb. 10: Bailey's Shaft: In driving the 160 fm. level west a portion of the lode, 2 ft. wide, has been taken down, and, being composed of strong capel, quartz, peach, mundic, with rich stones of tin and copper ores, is very promising. In the 150 west 3 ft. of the lode being carried produces a little copper ore. The lode in Rowe's winze, sinking below the 150 west, is at present not looking so well; it is, however, worth for length carried (10 ft.) 6 tons of ore, or 24*l.*, per fathom. In Nicholls's winze, sinking below the 150 west, the lode is improved, the part carried (5¼ ft. wide) proving a fine course of ore, worth for length of winze (10 ft.) 18 tons, or 80*l.*, per fathom. The lode in the two stopes in the back of the 150 is worth 8 tons of ore, or 24*l.*, per fathom. The lode in the 140 west produces a little ore. In the stope in the bottom of the 140 west the lode is worth 7 tons of ore, or 21*l.*, per fathom. In the 120 west the lode is large (5 ft. wide), composed of capel, quartz, peach, and a little copper and tin ores. The lode in the four stopes in the bottom of the 120 west is worth on an average 5 tons of ore, or 10*l.*, per fathom. In the stope in the back of the 110 west the lode is worth 4 tons of ore, or 12*l.*, per fathom.

ILLOGAN.—Richard Pryor, Feb. 8: The ground in the deep adit cross-cut, south of engine shaft, is of a more highly mineralised character than heretofore, which, with the water flowing from the end, gives us reason to believe that the lode is very near.

LADYWELL.—A. Waters, Feb. 10: The 32, driving south of engine-shaft, on main part of lode, is yielding good stones of ore; the end to-day is into a run of rich-looking gossan, which is charged with small needles of carbonate of lead. We shall get an improvement here shortly. We are also driving at this level on the cross course, which is running south-west, the indications being of a promising character. The 16, north of shaft, is on a sparry lode, worth ½ ton per fathom. The stope in back of this level is worth 12 cwts. per fathom. No. 1 stope, in the 16, south of shaft, is worth 1 ton per fathom. No. 2 stope, south of ditto, is worth ¾ ton per fathom. No. 1, ditto, in adit south of shaft, is worth 1 ton per fathom. No. 2, ditto, south of shaft, is worth 2 tons per fathom. No. 3 stope, south of ditto, is worth ¾ ton per fathom, and improving as we get up. We have to day sampled 25 tons lead ore, for sale next week.

LLANRWST.—Robert Knapp, Feb. 2: The caunter lode at the adit maintains its size and value, producing 2½ tons of lead ore per fathom. In the winze sinking towards this level, from the 10 above adit, the lode has improved, producing 2 tons per fathom. This is a valuable piece of ground, and from present appearances will continue to be so for some time to come. We have had to suspend the 10, above the adit, for a week or so, in consequence of not being to get away the stuff. We are now preparing the air-shaft for hauling, which at present is within 2 fms. of the end, and when this is completed shall at once haul away the stuff and resume its driving; the lode is of a fine appearance, 2½ ft. wide—good lead work for dressing. We have not yet intersected the main lode, south of Prospect shaft, in the 10; it is presumable that the lode has struck a little more south of east on approaching the cross-course, otherwise we should have intersected it before now. The mine is looking well at all points, requiring only the completion of the dressing machinery to convert the ore—of which there appears to be an unlimited quantity—into cash. I hope this will be speedily accomplished. The crusher and pitwork have arrived at the Llanrwst Railway Station, when ocular demonstrat on may be afforded to the public of the great value of the Llanrwst Mine.

— Robert Knapp, Feb. 9: The mine continues to look as good as ever, and good progress is being made at all points.

LOVELL (THE).—J. Prisk, E. Kempthorne, Feb. 10: The following is a copy of our setting which took place on Saturday the 5th instant. The cross-cut to drive south in the 20, east of shaft, by six men, at 15*l.* per fathom. The 30 to drive east on south lode by eight men, at 16*l.* per fathom; lode 9 ft. wide, worth 45*l.* per fm. The stope west of rise in the back of the 40, east of shaft, by six men, at 8*s.* 3*d.* per

ton; lode 12 ft. wide, worth 50*l.* per fathom. The stope east of rise in the back of the 40, east of shaft, to six men, at 5*s.* 3*d.* per ton; lode 12 ft. wide, worth 40*l.* per fathom. The south side of the rise to stope down towards the 40 by eight men, at 5*s.* 3*d.* per ton; lode 8 ft. wide, worth 30*l.* per fathom. All the landing by two men, at 5*l.* 10*s.* per month. All the filling by two men, at 4*l.* per month. All the spalling by four men, at 12*l.* per month. Our stamping and dressing are going on quite satisfactorily, and, on the whole, the mine is looking exceedingly well.

MELINDUR VALLEY.—John Kitto, Feb. 5: The main engine-shaft is down to the 38, and we have commenced to cut lodge and to cross-cut towards the lode, and hope to reach the latter in about a fortnight from this date. The lode seems to have completely changed its underlie, and I am expecting improved prospects in consequence. The 26 east has much improved since my last report, and is now yielding good ore, with every appearance of having entered upon a course of productive ground; this has taken place rather earlier than I anticipated. The 14 is also yielding saving stuff for lead, but there is no change worth referring to in any other part of the mine.

MONTPELLIER (Silver-Lead).—J. Woolcock, Feb. 4: In reporting on the prospects of the mine my task is a pleasing one, when I consider the productive character of the lode. It will have been seen from the prospectus of the above-named company that an adit level has been driven some 22 fms., from which driving some nice samples of silver-lead ore were taken, and during the past four weeks we have been opening out on the course of the lode, and several places for fully ½ mile in length, and I am pleased to state that at every point opened ore has been found—so much as to warrant a prosperous future to the company. On Jan. 21 last two holes were bored and blasted in the presence of Mr. J. E. Galliford, secretary of the company, from which blasts a quantity of stuff was blown up, disseminated throughout with silver-lead ore, which would pay for washing; and this, I may add, was on the surface of the lode. At this point it is necessary to remark that we are in close proximity to the north and south lode, which crosses the main lode at right angles, which lode also is strongly impregnated with ore. I have not the slightest doubt but what there is large deposits of silver-lead ore to be obtained if the mine is properly developed. Any gentlemen wishing to see the mine, I shall be most happy to show them, and let them see the ore broken from the lode, which will satisfy them more than by writing.

MONYDD GORDDU.—Richard Rowse, Feb. 9: The 12 east, on the south lode, is of great promise, and improving in character and value as we near the junction, which is only a few feet ahead of the present forebreast. The value at present is 30*l.* per fathom, with a leader on the south wall of the main lode, about 6 in. wide, composed principally of lead and blende ores, with a mixture of quartz, the most congenial for mineral. I trust, and fully believe, we shall have a great improvement here soon; the water is very strong, which is a capital indication. I have nothing fresh to report in driving the 12 east through the main lode, but look for a discovery of importance as we approach the south wall, which, from appearances in the winze and the level on the south lode, we have reason to expect. The water from the winze is not yet drained off. The three stopes over and under the adit will yield 15 cwts. of lead per fathom, and promising for an improvement. The weather is favourable, and with a continuance and a full supply of water we shall soon sample another parcel of silver-lead and some blende.

NEW CHIVERTON.—James Trewartha, Feb. 10: Setting Report: The engine shaft is now 13 fms. below the 35; lode worth 14*l.* per fathom, contract not out. The 35 to drive north by two men, the month, at 8*l.* per fathom; lode producing good lead work, and promising for improvement. The 35 to drive south by three men and three boys, the month, at 9*l.* per fathom; lode worth 5*l.* per fathom, and here we are daily expecting a good improvement. The adit level to drive north by two men, the month, at 4*l.* per fathom; lode kindly but unproductive. The adit end is now about 20 fms. below surface, and if driven 100 fms. further it would be 35 fms. below surface. The adit could then continue to be about the same depth (35 fms.) for 200 fms. further through this sett, so that we have fully 300 fms. of unexplored ground north of our present workings, 100 fms. of which is in rising ground, and 200 fms. on a flat or level piece of ground. The 200 fms. on the flat would seem to be a fine piece of mineral ground. There are three tribute pitches in the back of the 35 north, by six men, at 10*l.* per ton, and worth respectively 10*l.*, 9*l.*, and 8*l.* per fathom, and one pitch in the back of the 35 south at 10*l.* per ton; lode worth 7*l.* per fathom.

NEW CONSOLS.—Richard Pryor and Son, Thomas Jenkin, Henry Vial, Feb. 8: There has been no change on which to report in any of our underground points of operation during the past week. At surface the masons are making rapid progress in the building of the arsenic refining works and calciners, Saturday next being pay and settling day, a full report shall be sent you.

NEW SOUTH MERLLYN.—R. Rowlands, Feb. 10: No. 4 sump is going down well; judging by the appearance of the soil this morning, we are close to a run of ore leading from No. 3 winze.

NORTH LAXEY (*Telegram*).—R. Rowe, Feb. 8: Now come from underground; lode taken down this morning, and sample of it will be sent you by to morrow's boat. Lode in south end of shaft 4 ft. wide; not quite so wide in north end. This breaking down, worth about 15 cwts. per fathom.

— R. Rowe, Feb. 11: Took lode down in shaft last night; more lead in north end of shaft than seen before; increase of water.

NORTH POOL.—W. C. Vivian, F Clymo, Feb. 10: The lode in the 40 has retrograded a little in appearance since my last week's report, and is not producing those rich specimens of copper and wolfram (tungstate of iron) which I then referred to. It is, probably, only one of those fluctuations to which all metalliferous veins are subject, and it is quite possible that next week the lode may be looking better than it was last week.

NORTH TRESKERBY.—Richard Pryor, Feb. 9: The only change throughout the mine during the past week is in the lode in the stopes in bottom of the shallow adit level, east of Doctor's shaft, which has improved, being now worth about 14*l.* per fathom for copper ore.

OLD TINCROFT CONSOLS.—J Pope, Feb. 9: In the 30, west of Diamond shaft, the lode is 16 in. wide—a good lode of tin. In the 20 west the lode is 1 ft. wide—stamping work. In the 10 west the lode is 15 in. wide—good tinstone. The engine and stamps are in good working order, and doing the work very satisfactorily.

OLD TREBURGETT.—W. Hancock, W. T. Bryant, Feb. 9: We have communicated the 80 south with No. 3 winze, sunk under the 70, which has ventilated it well. The men are now squaring down the ground. In No 4 winze we are down to water; lode at present not looking so well, but will no doubt open out again; worth 85*l.* per fathom. Other places much the same as last reported on. We sampled to-day a parcel of No. 1 quality silver-lead ore, computed 30 tons, for sale on the 17th inst.

PARYS MOUNTAIN.—T. Mitchell, Feb. 10: The ground in the 90 cross-cut south continues of a favourable character, and good progress is being made in the driving. The 90, driving east of engine-shaft, is producing stones of copper ore, and improving in appearance. The 65 west is yielding a little copper ore of good quality, and the ground is looking very kindly. The 45 east continues to look very well, and opening out very good ground for stoping. The 30 is getting mixed with strong strings of copper ore, with a little more sulphur coming in the end. The stopes, on the whole, are looking pretty well, excepting those in back of the 65, west of rise, where the lode has become disordered. We have renewed the men to sink in the bottom of the 45 east, in order to open up a communication with the stopes in the back of the 65, east of cross-course, and to lay open more ground for stoping in this direction. We have sampled this week 275 tons of copper ore.

PATELEY BRIDGE.—C. Williams, Feb. 10: Gillfield: I am glad to be able to inform you that the Sun vein, in the shaft now in course of sinking under this level, is improving every foot as depth is attained, being over 5 ft. in width, filled with gossan, carbonate of lead, and blue ore, together worth about 10*l.* per fathom. We are evidently sinking here on the top of a good course of ore. The vein in the west cross-cut, in the 20, is letting out a great stream of water, and showing signs of our approaching the junction; this point is being vigorously prosecuted to get under the ore ground that went down in the level above.—Pringap: This vein is gradually improving, showing good ribs of ore now in the end. All other points throughout the mine remain as last reported.

PENNANT BARYTES.—Feb. 10: We are busy with the preparation of main-rod and other things to get the engine at work. The lift of pumps is complete, and we have an engine and crusher with all necessary arrangements in view. We have sent off a sample of carbonate this week—5 tons 3 cwts., at 70*s.*, and have applications from numerous other parties. I think next week we shall dispose of 100 tons of the sulphate, of which we have such a large quantity, so that you see we are pushing ahead.

PENNERLEY.—W. T. Harris, J. Delbridge, Feb. 9: There is no change in the mine calling for remark. The various bargains and pitches maintain the value put upon them last week, and satisfactory progress is being made.

PLYNLIMMON.—J. Garland, Feb. 10: New Shaft: Steady progress is being made in sinking below the 24; present depth 6 fms. 5 ft.; the lode is disordered by the floor mentioned in my last, but is now again getting more settled. In the 24, driving east of Hughes's winze, fair progress is being made; the lode again produces saving work, and presents a kindly appearance. In the cross cut going north of the adit level we are still passing through branches of lodestuff, but not anything of importance has been met with as yet. The stopes throughout the mine continue to yield the estimated produce given. During the past week we have again had severe frost, which has prevented us doing much towards dressing. To day we have had a heavy fall of snow, which I hope will lead to a change. The mine is in fork, and all machinery throughout is in fair working order.

PORT NIGEL.—Joel Manley, Feb. 9: Setting Report: The engine-shaft, sinking below the 56, is down 5 fms. 2 ft.; contract not out. We have here one of the most promising lodes I ever saw, yielding good stones of copper and lead ores. The 56, to drive east, by six men, one month at 4*l.* 1*s.* 6*d.* per fathom. As this end is now approaching the run of ore ground driven through in the 44 for about 30 fms., an early improvement may be looked for. The stope over the back of the level, west of No. 1 winze, by four men, at 3*l.* 2*s.* 6*d.* per fathom; worth 12*l.* per fathom. The 56, to drive west, by two men, at 8*l.* per fathom, in a masterly lode composed of quartz, copper, and lead ore. The stope over the back of this level, east of rise, by four men, at 3*l.* 15*s.* per fathom; worth about 14*l.* per fathom. The stope, east of No. 1 winze under the 44, by four men, at 3*l.* 5*s.* per fathom; worth 15*l.* per fathom. At No. 2 winze, under the 44, in cutting into the lode we tapped a large head of water, consequently it is suspended; yielding good lumps of lead ore. It is a strong lode. No. 3 stope, over the 44 east, by four men, at 3*l.* 7*s.* per fathom; worth 10*l.* per fathom. No. 4 stope, by two men, at 3*l.* per fathom; worth 14*l.* per fathom. The rise over the 34 east, by two men, at 4*l.* per fathom; this rise is to communicate with the 14 for ventilation. The old stope, by two men, at 2*l.* 17*s.* 6*d.* per fathom; worth 12*l.* per fathom. I purpose sending out samples on Wednesday next for 40 tons of lead ore and about 5 tons of carbonate or white lead. All other work going on as usual, and pit work and machinery working well.

PRINCE OF WALES.—J. Andrews, J. Pryor, Feb. 9: There is no change in the 77 west. In the 55 west the lode is looking very encouraging, being now 2 ft. wide, yielding rich stones of yellow copper ore. The lode in the 45 west is 4 ft. wide, yielding occasional stones of copper ore.

RELISTIAN CONSOLS.—J. Curtis, Feb. 10: Duke's shaft is about 4 fms. below the 24, and is being carried 4 ft. wide, with good stones of tin in it, and no south wall yet seen. I should recommend the shaft to be sunk 6 ft. deeper, and at that point a cross cut to be driven south to ascertain position of the two lodes.

ROMAN GRAVELS.—A. Waters, Feb. 10: The 95, north of old shaft, is worth 36*l.* per fathom; the 95, south of caunter, south of the above shaft, is worth 45*l.* per fathom. The shaft sinking below said level on the north end of the mine, is at present going down by the side of the Roman lode. Our object is to get down 9 or 3 fms. before we cut into the lode, by which time we hope to get pumping-gear ready. The new south engine-shaft is down 9 fms. below the 80, ground favourable for progress. The said level, driving south of the latter shaft, continues to go forward in a strong lode, worth 14*l.* per fathom. The winze below the 65 (at a point in front of the said 80 end) is down 3 fms., by the side of a lode 3 ft. wide, worth 12*l.* per fathom. The 65, south of Stoke's winze, is worth 31*l.* per fathom. The lode in this end for some time past has been in two parts, but the divisions will form into one in 3 ft. further driving, when an improvement may be expected. The stopes generally are yielding ore in the usual quantities. We have to-day sold 200 tons of lead ore, realising 3086*l.* 5*s.*

ST. AGNES CONSOLS.—Wm. Vivian, Feb. 10: At the 72, west of south cross-cut, the stopes in the back are worth 10*l.* per fathom for copper and tin; stoping by six men, at 6*l.* per fathom. The stopes in the bottom of the same level are worth 7*l.* per fathom; stoping by two men, at 5*l.* 10*s.* per fathom. It the 72, east of north cross-cut, the stopes are worth 8*l.* per fathom; stoping at 6*l.* per fm. by four men. The 84 cross-cut is being driven south to intersect Wheal Kitty lode, by six men, at 13*l.* per fathom.

ST. DAVID'S.—J. Jones, Feb. 10: The improvement in the lode in the workings from Pantasa shaft, mentioned in my last, has not up to the present realised my expectations as to bearing lead; but the ground continues to improve for driving, so that we may expect a change for the better any day.—Edward's shaft: The driving north from bottom of this shaft continues to improve for lead, and I believe we shall soon reach the run of ore found in the level above us. The rise in the roof of the 28 yard level continues to yield lead in fair quantities.

ST. PATRICK.—W. Francis, Feb. 9: Since the last weekly report the 90 yards cross cut north has broken into a large cavern on the cross-course measuring 32 yards long, in the direction of the cross cut, and containing over 1000 cubic yards of space. An east and west "feeder" of spar is laid open at the north end 1 in. wide, and the cross-cut is now being carried on further northward. This cavern has enabled the cross-cut to be carried 32 yards forward; and by reason of there being sufficient space to hold "deads" for months, very speedy progress may be anticipated with quick results, when coupled with so favourable a feature. The 120 yards north cross-cut is still hard, and without change to notice.

SOUTH CONDURROW.—Wm. Rich, Feb. 9: There is nothing new to report on this week, but I will report fully for the meeting in the ensuing week.

SOUTH DARREN.—J. Boundy, W. H Boundy, Feb. 7: Since the last report we have taken down the lode in the 90 end, driving west, and we are glad to inform you that the lode has considerably improved in its character as well as in value, now worth 30*l.* per fathom for lead and copper ore, and from indications we expect further improvement. The lode in the stopes over the 90 west is also looking better, now worth for lead and copper 18*l.* per fathom. The lode in the 80 end, driving west, continues to yield good branches of lead ore, and showing good indications for improvement. There is nothing new in any of the other bargains worthy of remark since last report. If the weather proves favourable we hope to send out samples of lead this week. Machinery in good working order.

SOUTH GREAT WORK.—S. J. Reed, Feb. 10: The Orchard lode, in the 55, driving west from the flat-rod shaft, is now more defined, and improves as we open on its course. This end is now within 2½ fms. of a winze which has been sunk some 2½ fms. below the 45, in which there is a lode worth 12*l.* per fathom. The end before referred to is being pushed on with vigour, so as to prove the point as early as possible.

SOUTH PRINCE PATRICK.—J. Jones, Feb. 10: The flat in the workings from western shaft has been greatly disarranged by the large swallow (or fissure) we have met with here, and I have now come to the conclusion that we must sink below it in order to reach the lead-bearing ground in this strong flat. We are now going on with the sinking, and as the ground is not as yet very hard, I do not think we will be long before reaching the desired part. The lode lately discovered in Salisbury shaft is an exceedingly strong one, and for the last two or three weeks the indications in it have been such as to lead me to expect to cut into lead daily; but it was yesterday we reached it, and I am glad to say that we found it in such a quantity as to raise our hopes of soon getting into as strong a body as any we have seen in the other lode; but I will be in a better position to write more fully next week.

SOUTH TOLCARNE.—Joseph Vivian and Son, Jas. Paull, Feb. 10: We have resumed sinking the engine-shaft below the 40, where the lode is the same as last reported. In the 40, east of cross-cut, the tin lode has improved, and is now 4 ft. wide, worth 12*l.* per fathom. In the same level west the lode is 2 ft. wide, and worth about 7*l.* 10*s.* per fathom. We have suspended the driving of the 30, east of cross-cut on Fraser's lode, and the men have commenced sinking in the same level, where we had the copper ore; as yet, however, we have not seen anything of the lode, but next week we may be able to report on its appearance.

SOUTH WARD MINE.—R. Goldsworthy, Feb. 9: No change to notice in the 90 fm. level cross-cut. In the 72 south the lode is 2 ft. wide, producing good stones of lead; and from its appearance we think the ore-bearing part is opening out wider, and when next taken down I hope to report a good improvement.

TANKERVILLE.—Arthur Waters, Feb. 10: The 167, west of winze west of shaft, is being driven on the footwall part of the great lode, the part being carried yielding 5 tons per fathom. We are also shooting down the hanging side of said level behind the end, where the lode is yielding 5 tons per fathom, and still there is no sign of being through the lode. The 167 east is worth 3½ tons per fathom. The stope in this level, on the footwall portion of the lode, is worth 5 tons per fathom; this is only from about half of the width of the lode. Other bargains at work above the 152 yielding in the aggregate 33 tons of lead ore. We have to-day sampled 150 tons for sale on Thursday.

TEESDALE.—T. Watson, Feb. 3: In the north end workings the men have been engaged last week putting in timber and stoping out some of the pieces of vein left by former workers; they are meeting with good payable ore in the old men's leavings. We have finished arching the level to-day, and will now commence to stope out the vein going north from rise. In the south end stope the men have been stoping out some of the vein close to the level roof; it is very hard ground close to the level, and will not have much lead ore in it until we get 4 or 5 ft. above the level. In the south level we now have a strong vein, with some signs of the limestone at bottom of the level. In Hopkins's level the vein in the forehead is still parted in two, with hard ironstone between. I have only had two hands engaged at surface this last month winning stones, looking after road, and other jobs. Lead ore dressers have been at work part of last week and this. There is snow to-day. The joiner is engaged putting up a stable, which has long been needed.

VAN CONSOLS.—James Roach, Feb. 10: The lode in Murray's shaft is still good, but not as productive as when last reported, but it seems to be improving again. I have set drivings east and west of shaft, and both ends are in a good lode of lead. All work throughout the mine is going well. We shall sample another parcel of lead as quick as possible.

VRON.—S. Harper, Feb. 5: In driving the 40 yard level cross-cut north from footwall shaft, we yesterday cut into another east and west joint or lode, which is at right angles with our drivings, and from present appearance I think it to be the No. 2 lode, as seen at surface; we have cut into it about 2 or 3 ft. composed of lode spars of different kinds, carbonate of lime and a beautiful gossan; the ground about it cannot be more favourable for producing lead ores; I shall be better able to inform you again on this subject about the middle of next week, which, all being well, I will do.

WEST CRAVEN MOOR.—D. Williams, Feb. 7: We have cut the lode in Blackhill adit level; it is composed of spar, barytes, and lead ore, and is very strong. I have no doubt, when we get in a few feet further, and clear of the influence of the cross lode, we shall have a splendid lode here. I have sent you a box containing some fine lumps of almost solid lead, recently brought to surface. They will enable you to form an opinion of what we shall have as our points of operation are opened out. Will forward setting report in time for the papers this week.

— Feb. 9: I beg to hand you setting report as under—Blackhill adit level, to six men, to drive east, at 140*s.* per fathom. I am pleased to inform you that we have again cut the lode, which is fully 2 ft. wide, composed of spar barytes, with fine spots of lead ore, and is very promising for further improvement as we get clear of the influence of the cross lode.—Cross-cut south to the parallel lode (three of which will be met with in 40 fathoms drivage) to four men, at 120*s.* per fathom. The ground here has much improved for driving, and good progress is being made. We have this week cut into a flat lode, 2 ft. thick, rising south-west and dipping north-east, filled with gossan, clay, and calespar, with spots of ore, and will, I have no doubt, be found very productive close to the east and west lodes.—West shaft to sink 10 ft. by 4 ft., to six men, at 250*s.* per fathom. Lode 3 ft. wide, same value as last advised, 30*l.* per fathom. In east shaft we have been cross-cutting south, and have driven through the lode; it is 3 ft. wide, comprised of limespar, gossan, and stones of lead ore. We are now cutting plat, and will drive west on the lode early next week, and the ore will no doubt improve in that direction. To sink in new discovery, to three men, as a metal pitch at 10*s.* in 1*l.* Also a metal pitch on surface to two men, at 56*s.* per bing, including dressing. And two men to trench on surface, to prove the backs of the lodes in the eastern part of the mine.

WEST GODOLPHIN.—John Pope, Feb. 4: Setting Report: Caunter Lode: Pressure Shaft: The 60, sinking to six men, at 30*l.* per fathom; lode 2 feet wide, worth 15*l.* per fathom for tin for length of shaft.—Wilson's Lode: The 60, driving west, to six men, at 5*l.* 10*s.* per fm.: lode 5 ft. wide, worth 20*l.* per fathom for tin and copper. The 60, driving east, to two men, at 5*l.* per fathom; lode 3 ft. 6 in. wide, worth 7*l.* per fathom for tin. The 50, driving west, to two men, at 4*l.* 10*s.* per fathom; lode 1 ft. 6 in. wide, producing low-price tinstuff. The 50, driving east, to two men, at 5*l.* 15*s.* per fathom; lode 4 ft. wide, worth 15*l.* per fm. for tin. The 50, driving east, to two men, at 4*l.* per fathom; lode 4 ft. wide, worth 8*l.* per fathom for tin and copper. The 50, stoping bottom east, to six men, at 5*l.* per fathom; lode 10 ft. wide, worth 30*l.* per fathom for tin; this width includes lode and branches. The 40, driving west, to two men, at 4*l.* per fathom; lode 1 ft. 8 in. wide, producing low price tinstuff. The 40, driving east, to two men, at 5*l.* 10*s.* per fathom; lode 1 ft. 6 in. wide, worth 4*l.* per fathom for tin. The 40, stoping bottom east, to six men, at 2*l.* 10*s.* per fathom; lode 6 ft. wide, worth 6*l.* per fm. for tin; this width includes lode and branches. The 30, driving east, to two men, at 3*l.* 10*s.* per fm.: lode 2 ft. wide, worth 3*l.* per fathom for tin. The 30, stoping bottom east, to two men, at 1*l.* 10*s.* per fathom; lode 1 ft. wide, worth 3*l.* per fathom for tin. The 10, driving east, to two men, at 4*l.* per fathom; lode 1 ft. 6 in. wide, low-price tinstuff. The deep adit, rising east, to six men, at 6*l.* per fathom; lode small; we have a very hard floor of ground in this rise, which has made the progress for rising very slow of late. Shallow level, driving west, to two men, worth 2*l.* 10*s.* per fathom; lode 3 ft. wide, low-price tinstuff. Boulton's shaft, sinking east, to nine men, at 6*l.* per fathom; lode small. We have four men blasting down the side of the 60 west, on Wilson's lode, and have opened it 9 ft. wide (level included), all good tinstuff. We have four men blasting down the side of the 60 east, on Wilson's lode, and have opened it 14 ft. wide (level included), all good tinstuff. The 60, stoping south, on caunter lode, to two men, at 10*s.* in 1*l.*; lode 2 ft. wide, worth 5*l.* per fathom for tin; the 50, stoping east, on Pink lode, to four men, at 10*s.* in 1*l.*; lode 1 ft. 3 in. wide, worth 6*l.* per fathom for tin; the 50, stoping west, on Pink lode, to two men, at 10*s.* in 1*l.*; lode 1 ft. 3 in. wide, worth 6*l.* per fathom for tin; all at a standard of 45*l.* per ton for the tin. We have two men engaged cutting ground and laying down tramroad in the 50, and two men cutting ground at the 30 for fend-off bob.

WEST GREAT WORK.—S. J. Reed, Feb. 9: In the 10, west of Duke's shaft, the new lode has been opened on 9 ft., and is worth for this distance fully 9*l.* per fathom. This is a caunter lode, which has a favourable bearing for making large deposits of mineral. In the drivage east the lode is 2½ ft. wide, with good underlie, and worth 4*l.* per fathom. I purpose driving off at a deeper level to prove this lode, the prospects of which for the depth and distance opened have seldom been exceeded, especially as we are close upon an elvan in connection with which large quantities of both tin and copper have been found.

WEST MILWR.—Wm. Francis, Feb. 8: We have just commenced sinking the sump on the clay joint, with most encouraging indications. The cross-cut is also being continued south by four men, in congenial measures. The progress in both trials is speedy and satisfactory in the highest degree.

WEST ROSKEAR.—H. Stephens, Feb. 10: The lode in the 12 end driving west is a mass of blende and mundic, with good stones of yellow copper ore: an exceedingly fine lode. We are carrying about 6 ft. of it, but do not know the size. We intend to cut through it next week. The lode in Lanyon's shaft is 6 ft. wide, composed of mundic, copper, and spar, with a leader on the footwall 15 in. wide, worth 8*l.* per fathom for copper. This is an excellent feature in the mine. The lode in the winze, west of Lanyon's shaft, continues about the same value as last reported—30*l.* per fathom. The lode in the adit driving west contains a little ore, with good indications for speedy improvement.

WEST TANKERVILLE.—A. Waters, Feb. 10: The south boundary shaft below the 63 makes fair progress. The 63, south of shaft, is worth 1 ton per fathom. The stope in roof of this level is worth 2 tons per fathom. The 50, south of shaft, in direction of the shale is worth 2 tons per fathom. The winze below said level will be holed to the 63 in a day or two, when the men will be put to stope on a lode worth 2 tons per fathom. No. 1 stope in back of the 50 south is worth 2 tons per fathom, No. 2 stope 1½ ton, and No. 3 stope 2 tons per fathom. The stope in the 46 south is worth for lead and blende 35*l.* per fathom.—Old Mine: The 48 going south-west towards side lode continues to pass through nice looking strings and branches of spar and lead ore; we expect a discovery here in due course when the lode is cut into. The 48 east and west on white stone vein are both without change to notice since my last report. We have to-day sold 20 tons lead ore for 307*l.* 10*s.*, and 20 tons blende for 105*l.*, together 412*l.* 10*s.*

WEST WHEAL TOLGUS.—Feb. 10: Taylor's Shaft: At Taylor's shaft, under the 125, the ground is much the same as for some time past; shaft nearly down. In the 125 west the lode is 1 ft. wide, and poor. In the 115 west the lode is 5 ft. wide, yielding 4½ tons of ore per fathom. In the rise in the 115 west the lode is 4 ft. wide, yielding 3 tons of ore per fathom. In the 105 west the lode is 5 ft. wide, with spots of ore. In the 95 west the lode is 2 ft. wide, yielding 1 ton of ore per fathom. In the 85 west the lode is 5 ft. wide, yielding 2 tons of ore per fathom. In the stope in the back of the 125 west the lode is yielding 5 tons of ore per fm., worth 40*l.* per fathom. In the stope in the back of the 125 the lode is yielding 3 tons of ore per fathom, worth 20*l.* per fathom. In the stope in the bottom of the 115 east the lode is yielding 3 tons of ore per fathom, worth 18*l.* per fathom. In the stope in the back of the 95 west the lode is yielding 4 tons of ore per fathom, worth 25*l.* per fathom. In the stope in the back of the 95 west the lode is yielding 1½ ton of ore per fathom, worth 9*l.* per fathom. In the stope in the back of the middle level, under the 85 west, the lode is yielding 2 tons of ore per fathom, worth 13*l.* per fathom.—Richard's Shaft: At Richard's shaft, sinking below the 75, the ground is a little harder killas, with more water. In the 75 west the lode is 5 ft. wide, yielding 2 tons of ore per fathom. In the rise in the 65 west the lode is 1½ ft. wide, yielding 1 ton of ore per fathom. In the stope in the back of the 75 east the lode is yielding 2 tons of ore per fathom, worth 11*l.* per fathom.

WHEAL BASSET AND GRYLLS.—Paul Prisk, Feb. 7: Setting Report: On Friday last we set the 12 to drive east of the shaft, on the south lode, to four men, at 5*l.* per fathom; lode at present disordered by a horse of granite in the upper part of the level, while in the bottom the branches are united, forming one lode, strong and well defined, yielding good work for tin, worth about 8*l.* per fathom. The stopes in the back of the 12, east of shaft, on the south lode, to four men, at 4*l.* per fathom; lode about 5 ft. wide, worth 10*l.* per fathom. In the winze sinking below the 12 the lode is from 3 to 4 ft. wide, and of a well defined character, worth about 18*l.* per fathom; here we have an increase of water, more than we can conveniently keep by manual labour. We are now busily engaged in putting pitwork in it to be connected with our pump work in the shaft; this will be completed in about eight or ten days.

WHEAL CREBOR.—J. Andrews, Feb. 8: There is no change in the 120, 108, or 72 ends east since last report. The lode in the 48 east is looking more promising, and is yielding more mundic, but as yet is of no value for copper. No. 1 stope in the back of the 48 is 8 ft. wide, worth 20*l.* per fathom. No. 2 stope in the back of same level is 6 ft. wide, worth 30*l.* per fathom.

WHEAL GRENVILLE.—T. Hodge, Feb. 2: Great Lode: The 160 west end is worth 10*l.* per fathom. The 160 east end is worth 9*l.* per fathom. The 150 east end is worth 10*l.* per fathom. The 130 east end is worth 12*l.* per fathom.—North Shaft: The winze sinking below the 130 north cross cut, on the branch, continues to yield good stones of tin. Without doubt we shall discover a good lode in the 140, below the said point. The 140 north cross-cut is making fair progress towards the great lode. The 130 east end is looking better, worth to day 13*l.* per fathom. The rise in back of the 130 is worth 25*l.* per fathom. The vein in the 130 east end, on the old lode, is yielding stamping work.

WHEAL KITTY (St. Agnes).—S. Davey, R. Harris, Feb. 5: New Shaft, Pryor's Lode: The ground in the 154 cross-cut north is composed of hard capel, which retards progress, but the end is being pushed on to reach the lode as fast as possible. The lode in the 142, driving west of shaft, is 3 ft. wide, and worth for tin 18*l.* per fathom. The lode in the 142, driving east of shaft, is worth for tin 8*l.* per fathom—a promising looking lode. The lode in the 130, driving west of shaft, is worth for tin 13*l.* per fathom. The lode in the 118, driving west of shaft, is worth for tin 9*l.* per fathom. The lode in the winze sinking below the 118, west of shaft, is 3 ft. wide, and worth for tin 16*l.* per fathom. The lode in the winze sinking below the eastern adit level is producing a little copper and tin, but not sufficient of either to value. The lode in the 100, driving west of engine-shaft, is 2 ft. wide, and worth for tin 7*l.* per fathom. In the 90, driving east of engine-shaft, the lode is worth for tin 5*l.* per fathom.

WHEAL PRUSSIA.—W. Tregay, Feb. 10: The lode in the 40 east end is producing 1 ton of black tin per fathom. No other change.

WHEAL UNY.—Wm. Rich, Matthew Rogers, Wm. Rich, jun., Feb. 5: The ground in the rise in back of the 150, towards Hind's engine shaft, is rather easier. The shaftmen are busily engaged in fixing new plunger lift at the old sump, which we hope to complete in about a week or ten days. The 150 end, west of incline shaft, is worth 12*l.* per fathom. The 150, east of Goodluge's, is poor. The 140, east of King's, is worth 10*l.* per fathom. The 130 east is suspended for the time, and the men put to sink a winze in bottom of this level. The 120 end east is worth 12*l.* per fathom. The 110 end east is worth 10*l.* per fathom. The 100 east carries stones of tin.

WHEAL RUSSELL.—John Bray, Feb. 10: The lode in the 25 is looking more promising than it has for the last 34 fms., producing copper and quartz, spotted with ore. The lode in the stopes throughout the mine continue to yield fair quantities of ore. We shall sample for this month 100 tons.

ECHOES FROM THE MINING MARKET.

A reaction is apparent in some of our lead shares, owing chiefly to realisations on the part of the public who being holders at low prices have secured profits, and have thus caused a temporary depression. The occurrence of the fortnightly settlement—a very heavy one—has also interfered with market values, as the attention of dealers and brokers has been almost exclusively engaged in the adjustment of their multitudinous bargains of the past fortnight, and thus many shares for want of support have been unduly weakened. As soon as ever the market has absorbed the surplus stock that for the last few days has weighed down prices, we may again expect to see a buoyant tone predominant, for the great activity we have witnessed has been due to perfectly legitimate causes, and, therefore, is not likely to be permanently affected by events more or less of a temporary character. East Van shares, although they have undergone some amount of fluctuation, in sympathy with the weaker tone alluded to, have already recovered their value, and at the time we write are almost at their best. The report just to hand from Capt. Williams shows that in a few days an important point will come off, whilst the general information as to prospects and progress is of an encouraging nature. Roman Gravels, Tankerville, and many of the higher priced shares have maintained their values, the reaction being apparent principally in the more speculative class of low-priced shares. Of these North Laxey have fallen from 2*l.* to 25*s.*, 30*s.* The news from the mine notwithstanding is good, and a telegram just received states that the lode in the shaft has again been taken down, and that there is more lead in the north end of the shaft than has been seen before. The water is also increasing. So here depression is due to realisation, as the mine is actually looking better than when the shares were at 2*l.* Doubtless many of our readers are aware that, as a rule, when a reaction comes and prices droop holders being frightened sell, and thus help to further weaken an already weak market. So, on the other hand, in a very buoyant market they buy. Cautious speculators, however, choose a time of depression to pick up stock, and in nine cases out of ten find that profitable results follow. This hint we trust may be of value to many. Plynlimmon shares from 22*s.* 6*d.* to 25*s.* have fallen to 10*s.*, 12*s.* 6*d.*, owing to the same influences as have weakened North Laxey, for the mine has not at all altered, and the chief point of interest in the cross-cut has not yet come off. The shares are now very cheap.

West Tankerville shares have not further receded from the lower price of last week, but Assheton, West Assheton, Glyn, Van Consols, and Pennerley are all lower. From Pateley Bridge reports continue very favourable, and with energetic working these, and the adjoining Craven Moor, mines should before long bring the rather neglected (so far as the public has been concerned) Grassington district into favourable notoriety. The famous lead mines from which this district takes its name have been, perhaps, the richest in the world, but as they are held privately (the Duke of Devonshire is the proprietor) their wealth has never attracted such public attention as it would have done had they been owned by public companies. The returns for a long time were of almost fabulous value, and even now it is said they never yield less than 30,000*l.* per annum. Both Pateley Bridge and West Craven Moor are likely to advance in price. It may not be generally known that in Yorkshire and the adjoining county of Durham the greater part of the lead raised in England is obtained.

In copper shares Parys Mountain have remained steady upon favourable reports as to the cross-cut to the Mona lode.

The colliery share market has been rather dull, although a good enquiry has existed for Chapel House and Cardiff and Swansea. The latter are now 8*l.* 10*s.* paid, and the quotation is 2¾ to 3¼. At Chapel House matters are progressing fairly, and we hear the debentures continue to be steadily taken up. The colliery is now turning out on the average 300 tons of coal daily, at a profit of about 12,000*l.* a year. The machinery, however, is not completed yet, and another engine must be erected, and the new shaft finished, before the anticipated output of 1000 tons daily can be reached. If the present rate of profit is maintained the dividends should within the next year or two largely increase; and at 3¼ to 3½, with 5*l.* paid, the shares should be cheap. All the work done, we are glad to hear, has been accomplished in a most solid and substantial manner, the pits being of excellent dimensions, and thoroughly well cribbed. A few Thorp's Gawber have changed hands; and business has also been done in West Mostyn 12 per cent. preference shares.

Cornish shares, after showing a few signs of animation upon the result of the Banca sale, have become quiet again, and, generally speaking, the advances that have taken place have been lost. West Basset Mine has made a call of 10*s.* per share (3000*l.*), the amount generally expected, and the report read was good. The statement of the manager that with tin above 45*l.* profits could be made, is a most favourable feature, and the shares are very likely ones for a rise. Three or four other meetings have been held this week. West Frances shows a loss of 218*l.* on three months' working. The prospects here are good, and it is stated the returns of tin will shortly be increased. The West Basset lode has not yet been intersected in the 132 cross-cut. At Cook's Kitchen meeting a call of 10*s.* per share was made (1225*l.*) Quarter's loss, 876*l.* This, with previous debit balance of 934*l.*, made a total deficit of 1810*l.* At the Pedn an-drea meeting, in London, the secretary resigned, and the future offices of this company will be the same as the Tankerville, North Laxey, Plynlimmon, West Tankerville, and others. At the Ding Dong meeting a call of 1*l.* per share was made. The loss on four months' working was 260*l.*, a total debit balance of 590*l.* This old mine, one of the oldest in the county, is looking very fairly, but with the present price of tin profits (unless discoveries are made) are out of the question.

South Frances has made a loss of 1312*l.* on four months' working, necessitating a call of 3*l.* per share. Ten out of the 62 relinquished and forfeited shares have been sold, at an average price of 11*l.* each, realising 110*l.*, which has been placed to the reduction of the debit balance from last account. It was stated at the meeting, and we are glad to have to record the fact, that with the exception of a small one for coals, every bill had been charged up in the accounts to the end of December last. Some interesting remarks were also made as to the identification of the lode the South Frances adventurers are sinking on (Pascoe's shaft), with the great lode of West Basset. The mine, after being very poor, now presents a better appearance, and altogether matters look more encouraging for the future. The accidents

and difficulties connected with the flat-rods have been surmounted, and much better progress, the agent anticipates, will be made in the next four months.

Although last week the Cornish smelters were giving 1*l.* per ton above their official quotations for ores, no alteration has been made in the standards. It would require a considerable rise to galvanise into activity the general depressed state of mining throughout the country. We may hear of isolated cases of mines having a spurt with only slight advances in the standards, but for general activity we want very much higher value for produce. Coals and mine materials, fortunately, are now very cheap, and are not apparently likely to increase in price just yet.

West Chiverton has lately sold 1880*l.* worth of lead ore, and has sampled nearly 400 tons of blende.

JAMES H. CROFTS.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, FEB. 11, 1876.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	3 1 3-	—
„ Scotch, all No. 1 ...	3 2 6-	3 15 0
Bars, Welsh, f.o.b. Wales	6 10 0-	—
„ „ in London.	7 10 0-	—
„ Stafford., „ .	8 15 0-10	5 0
„ in Tyne or Tees ...	7 0 0-	—
„ Swedish, London ..	15 10 0-	—
Rails, Welsh, at works..	5 15 0- 6	0 0
Railway chairs	— - -	—
„ spikes	— - -	—
Sheets, Staff., in London	11 0 0-12	10 0
Plates, Staff., in London	10 15 0-12	10 0
Hoops, Staff.	9 15 0-10	5 0
Nail rods, Staff. in Lon.	8 5 0- 9	0 0
STEEL.		
English, spring	16 0 0-25	0 0
„ cast	35 0 0-50	0 0
Swedish, keg.....	18 10 0-	—
„ fag. ham.	21 0 0-	—
LEAD.		
English, pig, common..	22 5 0-	—
„ „ L.B.	22 10 0-22	15 0
„ „ W.B.	24 0 0-	—
„ sheet and bar..	23 10 0-	—
„ pipe.....	24 10 0-	—
„ red	24 0 0-25	0 0
„ white	28 0 0-29	10 0
„ patent shot ...	26 15 0-	—
Spanish.....	21 15 0-22	0 0
SPELTER.		
Silesian or Rhenish, in English port ..	25 5 0- 25	10 0
English, Swansea	26 0 0-	—
Sheet zinc	31 0 0- 32	0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	81 0 0- 82	0 0
„ bars „ ...	82 0 0- 83	0 0
„ refined.....	84 0 0-	—
Australian	77 0 0-	—
Banca	86 0 0-	—
Straits	77 10 0- 78	0 0
QUICKSILVER.		
Flasks of 75 lbs., ware.	11 0 0-	—
COPPER.		
Tough cake and ingot.	86 0 0-	—
Best selected	87 0 0-	—
Sheets and sheathing .	91 0 0-	—
Flat Bottoms	94 0 0-	—
Wallaroo	89 0 0-	—
Burra, or P.C.C.	88 10 0-	(nom.)
Other brands	86 0 0- 87	0 0
Chili bars.....	79 10 0- 80	0 0
BRASS.		
Wire	9¼d.-	—
Tubes.....	9	-12d.
Sheets	9	-10
Yellow metal sheathing ...	7½	- 8¾
Nails composition.....	9½	-10½
TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 9 0-	1 10 0
„ 2nd quality ...	1 5 6-	1 7 6
Coke, 1st quality	1 3 0-	1 4 0
„ 2nd quality	1 1 6-	1 2 0
Black .....per ton	17 0 0-	17 10 0
Canada, Staff. or Gla., at Liverpool	15 0 0-	15 10 0
Black Taggers, 450 of 14 × 10	30 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 8s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—There is no change to report either in the present position of the markets or as regards future prospects. The business of the country in metals is at a low ebb, and prices generally, though too high for the purchaser, are too low to enable the producer to sell to a profit. Were the home consumption to fall off at all, and the shipping trade not to improve, there would be but little in the present aspect of affairs to encourage; but the chief support of the market has been obtained from the comparative steadiness of the home trade, which it is hoped may continue; for should this fail to any extent the markets would be most seriously damaged. The question as regards the future becomes each day one of increasingly serious importance. The trade is drifting on, and no improvement takes place. The general prosperity of the country, to which reference has been made, as a feature which should aid in the future development of the metal trade, exercises no present influence in the desired direction; and the problem presses for solution. Holders are naturally unwilling to realise at a loss, but it must be borne in mind that capital thus locked up is lying dormant—that interest thus accruing is eating into profits, and that even were a turn in an upward direction to take place the rise in price would have to be considerable to cover original outlay and superadded costs. The possible results of present realisation at such prices as would induce buyers to come forward might be not only to free holders from the annoyance of a protracted lock up; but to impart fresh vitality to trade, and bring about more speedily than would otherwise be the case a healthy action in the market. Anything almost would be better than continued stagnation.

COPPER.—The course of the market during the week has been towards lower prices, in consequence of the paucity of business; prices, however, are not yet sufficiently low to induce activity, and it may be that a considerable reduction may be necessary, inasmuch as the existing condition of the market has not warranted the upholding of quotations to the extent that has been the case. This remark refers more especially to dealers in foreign varieties. The English smelters have shown every disposition to meet the necessities of the times by effecting a reduction in their rates for manufactured, more particularly as regards Indian, by 4 sheets, in the expectation that prices of Chili bars and other foreign copper must come down. There is no doubt that, unfortunately for the holders of Chili bars, they have given too high a price for the same, and until they can be made to discern the desirability of parting with a portion at least of their stock on lower terms (for buyers will not take it over at present rates), there can be no other than a languishing market, and in the end it will probably be found that the wiser course would have been to recognise the true position, and have acted with decision. It must be patent to all who study with care the reliable statistics which from time to time appear in the public prints with regard to the condition of trade generally, that there is no immediate prospect of recovery, but that rather for a considerable period still we may have to look forward to dull times. Should this be so, what reasonable hope is there that the copper market will undergo any improvement? Speculators wisely stand aloof, and business is limited to the smallest requirements needed by consumers at the moment. Chili bars (g.o.b.) can be bought at 79*l.* 10s., and Australian, best brands, 88*l.* to 88*l.* 10s.

IRON.—The trade in South Wales continues as unsatisfactory as can well be imagined. The works that are now in operation are upon an average only employed about two-thirds time, and it is questionable whether this is not too high an average, and whether if even this can be maintained. No new orders of any importance are reported, and less is said about the hopeful prospects of the future than has as yet been heard. The steelworks exhibit a happy contrast to the dulness which is the universal characteristic of the ironworks. Contracts are booked, and work is carried on with energy, and fresh orders come forward to supply the place of those that are completed. The demand for steel rails should, as the market now stands, not only continue but improve; and it might be good policy on the part of some of the lines to buy not only for present but for future use; for under an altered condition of circumstances it is hardly likely that steel rails will be obtainable at current rates. The rapid increase of stocks in makers' hands in the north of England pig-iron markets has tended to depress prices since the issue of the returns of the Cleveland Ironmasters' Association, which show an increase of 19,500 tons accrued during the month of January. The output for this month exceeded that of December by about 6000 tons, and the shipments abroad fell to less than 17,000 tons. The number of furnaces in blast were during January 116, and the total iron in stock amounted to 93,800 tons. Not only has foreign shipment fallen off, but Scotch demand, in like manner, has become very much reduced. The condition of the finished iron trade is very unsatisfactory, more especially as regards the slackness which continues in the demand for railway bars. Merchant bars are quiet, and there is no alteration to quote in the plate trade.

In order to bring about a more active condition of trade a further reduction in wages appear to be absolutely imperative. No. 1 pig-iron is now quoted 55s., No. 3, 51s., and No. 4 forge 50s. Rails, 6*l.* 15s.; plates for shipbuilding, 8*l.*; merchant bars, 7*l.*; puddled bars, 4*l.* 17s. 6d. The Scotch pig-iron market opened flat at the beginning of the week at 62s. 1½d. On Tuesday business was done down to 61s. 8d., and on Wednesday a further drop to 61s. 6d. was reported. But on Thursday the market became firmer, and transactions were reported up to 62s. 10½d. To-day prices have given way, and business is reported at 61s. 3d. cash, 61s. 6d. one month.

SHIPMENTS.

Week ending Feb. 6, 1875 ..... Tons	7,518
Week ending Feb. 5, 1876	6,328
Decrease	1,220
Total decrease for 1876	11,974

LEAD.—The market has been quiet throughout the week, and quotations are not very firmly held. Good soft English pig is now quoted about 22*l.* 5s., and soft Spanish, without silver, 21*l.* 15s. to 21*l.* 17s. 6d.

ZINC.—90 tons London rolled has found buyers at 29*l.* 5s. to 29*l.* 2s. 6d. The larger proportion at the lower rate.

SPELTER.—Silesian is quoted 25*l.* 5s. Hard spelter is in some request so far as the superior brands are concerned, the supply of which is somewhat limited. Quotations range between 19*l.* 15s. to 20*l.* 5s., according to brand.

QUICKSILVER.—There has been but little doing during the week, and the price has fallen to 11*l.*

TIN.—The price has continued to fall all the week, and the market shows greater weakness to-day than at any other time. The tendency of business is towards contraction, and only trifling quantities can be disposed of at current quotations. So long as the prevailing opinion is against the article there is but slender hope that the downward course of the market will be arrested. It is not merely the statistical evidence in times like the present that influence prices, but the utter want of confidence displayed in the future produces a far more telling effect, and, therefore, it is not surprising, considering the gloomy aspect which business assumes, and the alarmingly over constrained state of mercantile affairs generally, that transactions should be so extremely limited, and prices tend to a lower position than hitherto.

Messrs. James and Shakspeare—COPPER: A decline has taken place in the value of furnace material, and importers have at last accepted 16s. 6d. for regulus, a price which they refused to listen to about a week ago. The sales of the week comprise Bolivian ore and regulus "to arrive," at 16s. 3d. and 16s. 9d. per unit respectively, and Chilian ore and regulus on spot, and regulus "to arrive" at 16s. 6d. per unit. At the Swansea Ticketing, on the 8th inst., 1021 tons of ore, averaging 20 1-16th per cent. produce, sold at an average of 16s. 2¾d. per unit. In bars we note a fall of about 20s. per ton, and this in spite of rather an active demand both for home consumption and export. The sales of the week amount to upwards of 1000 tons, which quantity in ordinary times would have been considered sufficiently important to cause an advance. The market still shows a tendency to decline, though it seems doubtful whether quotations can recede to any great extent, as the bulk of the metal, both here and on the way, is owned by very influential parties. The Chili charters for the latter half of January were announced on the 4th inst. as 2100 tons pure, of which 700 in bars and ingots, 1100 pure in ores and regulus for England, 300 bars for France; price at Valparaiso was on about a parity with quotations now ruling here, but leaving no commissions to merchants on either side. There is no change to note in Burra or Wallaroo, but the demand is slack, and no important orders offering except at a reduction on current rates. English remains quiet, and prices are exceedingly moderate as compared with other descriptions.—TIN: English is a shade easier, and may be called about 1s. per cwt. lower. Foreign sorts show a decline during the week of about 1s. 6d. per cwt. without causing much enquiry, but a further reduction of 6d. to 1s. would induce rather extensive purchases.—LEAD: Is again a trifle lower; at present rates, however, there is more demand springing up.—SPELTER: Rather dull, and quotations nominal, but Silesian can scarcely be imported except at a trifling loss.—QUICKSILVER: Has fallen to 11*l.* per bottle, and the enquiry is rather slack.

Messrs. Vivian, Younger, and Bond—COPPER: Chili bars have declined from 80*l.* 15s. to 79*l.* 15s., and a good quantity has been sold, both here and in France, at about the lowest figure. The market shows more weakness than has been the case for some time, there being decidedly more inclination to sell, but, the immediate wants being for the most part supplied, buyers are not eager to come in at the reduction. Charters for the second half of January were advised by cable ou Friday last at equal to 2100 tons fine, and prices at Valparaiso are becoming easier, Wallaroo and Burra cake have been in moderate demand, at 89*l.* and 88*l.* 10s. respectively. English manufactured is dull of sale, and the continuous decline in the Indian exchange is a serious impediment to regular business with the East. At the Swansea Ticketing, on Tuesday last, 1021 tons of ores sold, at an average of 16s. 2¾d. per unit for 20 1-16th per cent. produce; Cape ores, 27⅜ per cent., realising 16s. 5¾d. per unit. By private treaty, a cargo of regulus and ores sold at 16s. 9d. and 16s. 3d. respectively; and subsequently two cargoes of regulus, one to arrive at Swansea, at 16s. 6d. per unit, at which prices further parcels offer.—TIN: A dull and dragging market for all descriptions, with a decline of 20s. to 30s. for the week. English has not maintained the advance to 83s. for common ingot, and closes dull at quotations.

Messrs. Henry Rogers, Sons, and Co.—COPPER: This metal has drooped without reaction during the past week; we now quote Chili bar copper at 80*l.*, sellers. The home trade is still without animation, buyers awaiting lower prices.—TIN: Has declined 40s. per ton, sales of Straits having been made as low as 78*l.* Australian is quoted the same price. Tin-plates are now to be had at a slight reduction.

Messrs. Grenfell and Rickards—COPPER: It has been a dragging market during the past month. Manufactured is in such little demand that 91*l.* has been accepted for 4 × 4 sheets, and 75½d. for yellow metal, and even at these low prices the sales have been small. The continued fall in the Indian Exchange has had much to do with this. Regulus, so long held for 17s. per unit, has been sold during the past few days at 16s. 9d. (Since going to press two cargoes of Chili regulus have been sold at 16s. 6d.) This change in the views of importers of furnace material, and Chili charters for the month being advised as 4000 tons, have brought out many sellers of Chili bar copper, and considerable lines have been taken by consumers during the past week down to 80*l.* 5s. per ton, at which price there are still sellers. The great excess of imports over exports in 1875—referred to in our circulars of Dec. 10 and Jan. 10, whilst stocks are about the same as twelve months ago—needs explanation before we can see our way to any improvement in copper. —TIN: The reserve price of 50 guilders put by the Dutch Trading Company on their tin offered for sale on the 28th ult., causing only 14,000 out of 23,000 slabs to bh sold, the remainder being held over until the next sale, made the market here rather excited, and Straits gradually worked up to 81*l.* and Australian to 79*l.* 10s. At these prices sellers were more numerous than buyers. During the past few days the market has been quiet, and Straits now offers at 78*l.* 10s. and Australian at 78*l.* The production of English tin, contrary to many persons' expectations, is very slightly diminished, comparing 1875 with 1874.

Mr. Murrant—TIN: Foreign descriptions were rather easier and the sales difficult to effect, at the same time no considerable quantities could be had at quoted rates. A few small sales only of Straits and Australian were reported by the committee, and 79s. 6d. to 78s. for cash and forward delivery.—COPPER: Chili is quiet and lower in price, the feeling that lower values will soon rule appearing to gain ground. Australian is also dull. At the Swansea Ticketing of ore on the 8th instant about 205 tons in fine, average produce 20 1-16ths, fetched an average price of 16s. 2¾d. per unit. A limited business is reported by the committee at 79*l.* 10s. to 81*l.* 5s. for g.o.bs. and named brands, and 16s. 3d. to 16s. 9d. for ores, &c.

Messrs. Pixley and Abell—GOLD: The demand for gold has declined in consequence of the rise in the French exchanges and the cessation of the orders for Germany. The amounts coming on the market have, however, been taken for Paris, and coin to the value of 62,000*l.* has been withdrawn from the Bank, together with 180,000*l.*, sovereigns, which have been sent to the Brazils by the West India steamer. The Assam has brought 68,050*l.* from China.—SILVER: The market has again become weaker. After our last week's quotation of 54¾d. per oz. some amount was sold at 54⅝d. per oz.; but this price cannot now be obtained, and a further reduction is looked for before the amounts now on sale can be placed. About 74,000*l.* has arrived from the Pacific, and 92,000*l.* from New York. The P. and O. steamer takes 10,000*l.* to Bombay.

THE IRON TRADE—(Griffiths's Weekly Report).—Friday Evening. The Glasgow market for Scotch pig-iron closes this afternoon at 61s. 3d., cash buyers. This is a loss of 1s. 3d. per ton on g.m.b. iron since last week. The closing price on the Glasgow Exchange this day week was 62s. 6d., buyers. We quote makers No. 1 iron:—Gartsherrie, 73s. 6d.; Coltness, 76s.; Calder, 75s.; Langloan, 74s.; Summerlee, 70s.; Monkland, 63s.; f.o.b. Glasgow; Glengarnock, 69s.; Eglinton, 63s.; f.o.b. Ardrossan; Shott's, 74s. f.o.b. Leith; Kennie, 66s.; f.o.b. Boness. We have very little change to notice in the iron trade this week. The raw material in Glasgow and Middlesborough has given way, and the markets at both centres are more undecided; and the tendency appears to be towards increased weakness. The raw material on the Birmingham Exchange yesterday was firm, for the simple reason that the smelters are working without profit; and if lower prices are to obtain for native pig-iron in Staffordshire, the smelters will certainly blow out the furnaces. Of course, if colliers' wages are reduced, the time for labour extended, and coal reduced in price, this may alter the case; but as matters stand now, lower prices for pig-iron will certainly blow out the furnaces in Staffordshire, both north and south. With regard to manufactured iron, our market is very quiet. There is a certain demand for special kinds of best iron. This demand is of a normal character, steady and regular; but this applies to Yorkshire, marked Staffordshire bars, and specialities turned out by the leading makers. One or two works in Staffordshire—W. Millington and Co., and J. B. S. and C. Lees—have received good orders for boiler-plates this week; with these exceptions, orders for boiler-plates are by no means plentiful. Nail-rods were in fair demand on the Birmingham Exchange yesterday. The tin-plate trade is quiet; no change in price. It was reported on 'Change at Birmingham yesterday, that Mr. Stephen Thompson, the senior partner, of the old and highly respectable firm of Thompson, Hatton, and Co., tinplate makers, at Bilston, was retiring from the firm.

The settlement of the fortnightly account in the MINING SHARE MARKET has occupied the chief attention of the dealers this week, and has also caused great fluctuations in prices. It always happens in active markets that a great many speculators buy merely for a rise in price; they look for a profit without paying for stock. The "bears," on the other hand, sell what they do not possess in hopes of a fall, and both use their best endeavours to bring about what they each require. Thus, when the settling day arrives and heavy accounts have to be adjusted, shares are forced on the market for sale by the speculating "bulls" before pay-day, and this causes the very fall that the "bears" require in order to deliver what had they sold on "spec."

In most cases the state and prospects of the mines to which investors look have little or nothing to do with the changes in prices at these settlements. They are generally due to market operations.

The chief business since our last has been in East Van, North Laxey, Roohhope, Tankerville, West Tankerville, Roman Gravels, Parys Mountain, Pateley Bridge, Wheal Agar, Plynlimmon, Old Treburgett, Penstruthal, Ladywell, Great Laxey, Wheal Crebor, Marke Valley, Wheal Grenville, and a few others.

After the settlement was over a better tone prevailed, and there was a greater demand for one or two mines.

Van shares are 36½ to 37½, and in request; the sale of lead ore on Thursday (500 tons) realised 7846*l.* 5s.; blende (250 tons), 957*l.* 10s.: total 8803*l.* 15s., which we understand leaves a profit of nearly 5000*l.* on four weeks' working. East Van, 20 to 21; the lode so far as cut into here is worth 180*l.* per fathom. Roman Gravels, 14 to 14½. Tankerville, 12¼ to 12⅝; at the 167 west the part of the lode carried is worth 5 tons of lead ore per fathom. The sampling next week will be 150 tons of lead ore. West Tankerville have fallen to 2, 2⅛; no change of any importance in the mine.

North Laxey shares have fluctuated from 2*l.* to 1*l.* 10s., and leave off 27s. 6d. to 32s. 6d.; soon after our last a report was circulated that the lode in the shaft was not the Great Laxey lode, and this had a considerable effect upon the shares, and was, no doubt, circulated for that purpose. Our information was derived from the manager—Capt. Rowe—who was for many years the manager also of Great Laxey, and is the very best authority on the subject. Writing under date Feb. 8 he says—"I assert that North Laxey is Great Laxey lode, and I challenge and defy any man to prove to the contrary." This lode at the 120 was 6 in. wide in the shaft, and is now 4 ft. wide, and the latest telegram states—"Took down lode in shaft last night; more lead in north end of shaft than before; increase of water." In fact, everything here indicates a course of ore. Pateley Bridge, after reaching 8, 8½, have suffered a relapse, and leave off 6 to 6¼. The agent adds that the Sun vein is improving every foot, and is evidently on the top of a good course of ore. West Craven Moor, 10½ to 11½, and shares in demand. The mine, we understand, is likely to do well this year.

Rookhope shares have been largely dealt in at 22s. 6d. to 27s. 6d.; the mine, from what we gather from the manager, Mr. Blenkiron, is likely to turn out a great success, and a good paying property, at an early date. He calculates that there are many hundreds of tons of lead discovered in the mine, and that he will soon make good returns, commencing at 40 to 50 tons per month. Ladywell, 2½ to 2¾; the sampling here is 25 tons of lead ore. Old Treburgett, 10s. to 12s. 6d.; Parys Mountain, 20s. to 22s. 6d. Cook's Kitchen, 4½ to 5; at the meeting, in Cornwall, the accounts showed a loss on three months' working of 176*l.*; a debit balance of 1811*l.*, and a call of 10s. per share was made. The tin sold (53 tons) realised 2483*l.* West Frances, 8½ to 9; at the meeting here a loss was shown on the quarter of 218*l.*, and a debit balance of 1160*l.* The tin sold (64 tons) realised 2998*l.* It is reported the returns will shortly be increased. Ding Dong, 3½ to 4; a call of 1*l.* per share was made at the meeting.

West Basset, 4⅜ to 5; at the meeting the accounts showed a debit balance of 3263*l.*, and a call of 10s. per share was made. The tin sold (95 tons), 4229*l.*; tinstuff, 1473*l.*; copper, 514*l.* Devon Great Consols, 4½ to 5; at New shaft, on south lode, the part of the lode carried is 5 ft. wide, and worth 7 tons of ore, or 28*l.* per fathom; the 130 east is worth 12*l.* per fathom; the lode in Welsh's winze is worth 12 tons of ore, or 50*l.* per fathom. Assheton, 1½ to 2; Glyn, 2¼ to 2⅜; Pennant, 5 to 5½; Bedford United, 22s. 6d. to 27s. 6d.; Bog, 2s. to 3s.; Carn Brea, 38 to 40; Dolcoath, 38 to 40; East Caradon, 2½ to 3; East Lovell, 4 to 5; Great Laxey, 17 to 18; Marke Valley, 3½ to 3⅝; Pennerley, 1⅛ to 1⅜; Penstruthal, 9s. to 11s.; Plynlimmon, 12s. 6d. to 15s.; Providence Mines, 2 to 2½; St. Patrick, 22s. 6d. to 27s. 6d.; Cathedral, 25s. to 30s.: Great West Van, 15s. to 17s. 6d.; Monydd Gorddu, 3½ to 4; South Condurrow, 4¼ to 5¼; Tincroft, 18 to 20.

Trebeigh Consols, 9s. to 11s.; Van Consols, 2½ to 3; West Chiverton, 17 to 18; West Maria and Fortescue, 4s. to 6s.; West Seton, 35 to 40; West Great Work, ⅜ to 1; Wheal Agar, 3 to 3⅛; Wheal Crebor, 2¼ to 2½. Relistian Consols, ⅝ to ¾; the lode in the shaft is 5 ft. wide. New Rosewarne, ¾ to 1; Wheal Grenville, 2 to 2⅛; Wheal Kitty (St. Agnes), 2⅜ to 3¼.

Gold Run, 17s. 6d. to 19s.; the agent writes that he is gratified by the progress made in washing, and considers the future of the property very bright. Argentine, 6½ to 7; Eberhardt and Aurora, 8⅜ to 8½; Frontino and Bolivia, 2⅛ to 2½; Javali, 10s. to 12s.; Richmond, 6⅝ to 6⅞; San Pedro, 4 to 4½; Sweetland Creek, 2⅝ to 3⅛; Santa Barbara, 1⅜ to 1⅝.

The Market for Mine Shares on the Stock Exchange during the week has been again animated, and a large business doing. The fortnightly settlement, which was completed yesterday (Friday), showed that a large volume of business had taken place. Notwithstanding the further considerable and general advance in values, a small supply of stock has been placed on the market, and prices are well maintained. Home Lead Mines are in prominent request, and the comparatively low level of quotations yet ruling still attracts attention. It is evidently observed that the general range is even now much below the normal average, and the rapid rise confirms our previous statement that in most instances quotations were quite nominal; and the steady demand in progress seems likely to be stimulated by the improving prospects of many leading mines.

Van, 37 to 39; the monthly report will be found in another column. The mine is looking as well as usual, and the cross-cut towards the lode at the 105 has been commenced. The four-weekly sale on Thursday—500 tons of lead and 250 tons of Blende—realised the sum of 8803*l.* 15s. East Van, 20½ to 20⅝; the lode has been cut into for 6½ fathoms; the manager estimates that in driving the cross-cut a sufficient quantity of ore has been raised to dress up to 12 tons of lead, value 180*l.* Already spots of lead are being found in the second cross cut 20 fathoms east; it is expected 3 fathoms more have to be driven before intersecting the lode, and the manager is very confident of meeting with a continuance of the rich course of ore. There can be no question the lode now intersected is the Van lode, and it has every appearance that it will prove quite as great a mine in the east as Van in the west. There has been a very large business doing in the shares, and at the settlement some distinguished names were passed for shares. Van Consols, 2½ to 2⅝; the lode east and west of the drawing shaft at the bottom level continues in a good course of lead. Grogwinion, 6½ to 6⅝; an important improvement has taken place in the 12 east, on No. 4 lode, where some rich discoveries are likely to be made at any moment. No. 3 lode, in the Intermediate level, and also in the 68, has changed very much for the better during the past week, and all other points are looking as well as usual. Shares still in demand. The 12½ per cent. dividend was paid on the 9th inst.

Pateley Bridge, 6 to 7; in sinking the shaft under the Gillfield level on the Sun vein, the lode is fast improving, being now over 5 ft. wide. The agent is of opinion that he is on the top of a good course of ore. Other parts of the mine are also showing well for an improvement. West Pateley Bridge, 5½ to 6; operations are in satisfactory progress, and some important points will be attained in a few months. Rookhope Valley, 1⅛ to 1⅜; a recent inspection proves these mines to be in a much more favourable condition than had been expected. The capital in hand is computed to be more than sufficient for all purposes. Assheton, 1⅜ to 2; cross-cuts are being put at the 40 and 50. West Assheton, 2 to 2½; boundary shaft in regular course of sinking. West Wye Valley, 4⅛ to 4⅜; during the past week the mine has much improved at several important points, and prospects are better than ever, particularly in the 26 east, the deepest point in the mine. Early discoveries near the Wye Valley boundary are expected. Wye Valley, 7 to 8; the 22, driving towards the ore ground, is steadily improving, and shows clearly that a great deposit of lead is not far ahead. All other parts of the mine looking first rate. South Cwmystwith, 1½ to 2; the north lode has been cut in the eastern cross-cut. This is an important feature and adds to the value of the property. Other parts looking well.

Pennerley, 1⅛ to 1⅜; there is no change at the mine. The directors have this week issued the half-yearly balance-sheet, which shows a loss on the six months working owing to the board having decided to rectify the method of sampling and sales of ore as explained by the Chairman at the annual meeting last year. From the report attached to the accounts the mine may, upon the whole, be considered as improving. Llanidloes, 3⅛ to 3⅜; the lode in bottom level east has improved considerably, and also in a winze sinking below the 48. All other points looking as well as usual, and a good quantity of ore being raised. Bog, ⅜ to ½; at the meeting on Tuesday a resolution was passed to wind-up the company voluntarily under the supervision of the court. It must be a matter of regret that the company have been unable to prosecute the working to a successful issue. Melindur, 2 to 3; the manager reports that the mine is altogether much improved, and that in the 26 east in particular a decided change for the better has taken place. See report in another column. West Goginan, 2 to 2½; at last the new machinery is ready, and the agent reports that he will commence dressing ore immediately. The lode in the 24 (both east and west) has much improved, and some rich stopes are being opened out at several points, which will yield a large quantity of ore.

Argentine, 7 to 7⅛; active operations are in progress for working the Piqué section, where the lode in the bottom has been proved by the special commissioner to give an average of 2 ozs. 8 dwts. of gold per ton of ore; a cross-cut has been set at the 44 to intersect the same lode in the Captain section, where the lode is known to have gone down rich. This lode is expected to be reached in about a month from the present time, laying open a large amount of available ground. The shaft in this mine has been sunk to the 56 fm. level, where a cross-cut will be put out, laying open additional ground. By the steamer which left Liverpool this week for Rosario a further shipment of machinery was made, sufficient to put the whole of the 36 heads of stamps in complete repair, and also the reduction establishment. The total capital is 60,000*l.*, divided into 12,000 shares.

Richmond Consolidated, 6¾ to 7. Telegram received—"Week's run $35,000. Ore continues low in lead." The season's make of bul-

ion is $1,600,000, and since February $2,173,000. The refininery this eason has produced gold and siver to the value of $1,030,000, irrespective of the value of the lead. The week's run cannot be considered satisfactory, and no sufficient explanation appears to be given why the highly-leaded ores in the deeper washings are not yet available to improve the smelting results. On the first discovery of these rich bodies the manager cabled "Expect improved smelting results forthwith," and that promise has certainly not yet been fulfilled so far as the gross results are concerned, though we undesstand that a nearer approach to the assay value of the ore put into the furnace is now obtained in the bullion produced. The most encouraging feature in the manager's report this week is the statement that an average of the ore throughout the 92 ft. sunk in ore below the 600 ft. level yielded 37 per cent. in lead and $66 in gold and silver—equal to $103 ore. At the end of the 92 ft. sunk in the winze limestone was struck, thus indicating another change in the direction of the main lode, which went down in a direction nearly vertical between the 500 and 600 feet levels, and then branched off and flattened, again became sharper in its angle of descent, and is now, according to the present appearances, flattening again. This zig-zag or step-like character of the lode has ruled its course from the beginning. A drift from the 800 is about to be started. The winze on the West Hill side being now available, the next few weeks' work on that side should determine pretty accurately the extent of the ore body in that portion of the mine, and decide the question whether it is a distinct lode or a bed vein. The Lizette tunnel extension has evidently got into connection with some outlying portion of the West Hill discovery, and the proof, in length as well as depth, must soon be available. We learn that very stormy weather prevails at Eureka, and that No. 2 furnace is re-lining this week. Eberhardt and Aurora, 8⅝ to 8⅞; another shipment of bullion (5000*l.*) has been received, and the prospects of the mine are encouraging. It is understood that Capt. Drake will be in England early next month, with the accounts made up to the end of the last half-year. That the company may become its own bankers, and ship the whole of its bullion to this country, it appears probable that a sufficient amount of the divisible profits may be retained in hand to ensure the accomplishment of this most desirable object.

Tecoma, 1¾ to 1⅞; the latest report confirms the two first telegrams already published; according to the last telegram, more than 10 tons of ore were being extracted daily. The ore appears to be rich, giving 60 ozs. of silver, and 60 per cent. lead per ton, so that the workings should now be conducted at a considerable profit. Not wishing to depend wholly upon his own judgment as to the appearance of the mine and the value of the new developments, the manager obtained the opinion of the best mining experience of the country. Mr. Cullins (of the Flagstaff) had, therefore, inspected the property, and after a careful examination occupying two days, gave an opinion that the regular ore-bearing rock, peculiar to mines in limestone, had been struck, and that the mine was similar in formation and character to the Flagstaff. Mr. Cullins advises the continuance of the present explorations, the indications being such that he has no doubt they would eventually develope a large mine, similar to the Flagstaff; and that if the bodies of ore lately found should become exhausted (as might be expected) in depth, other similar bodies can be securely calculated upon, larger and richer. The manager says he had from the first noticed the similarity of the Tecome and Flagstaff Mines.

Condes of Chili, 6½ to 7; although the company only took possession of the mines about a fortnight since, a shipment of ore will be made this month. The special commissioner sent out to inspect and report upon the mines estimates that 300 tons of silver ore can be returned, leaving about 10*l.* per ton profit. Mr. James Escombe, many years the respected manager of East Caradon and Marke Valley Mines, has been engaged, and will sail for Valparaiso next month. The first important operation will be the continuance of the adit level, to intersect the seven lodes known to exist in the property; the intersection of the lodes will thus be made at a depth of 70 fms. under the present workings. Several of these lodes are expected to prove of equal richness to the one now producing such extraordinary returns.

The Market for Hydraulic Mine Shares on the Stock Exchange has during the week been tolerably active. The telegrams announcing the clean-up at Sweetland and Birdseye are the first of the season; and, as the rain-fall has been large to the present time, there appears to be no doubt of a lengthy water supply this year. Blue Tent, 4 to 4¼; the manager reports everything as progressing very satisfactorily. The ditch was getting more and more useful, and has proved to be a capital piece of work, having stood the storms remarkably well. Washing was continuing on the Blue Lead and Enterprise claims; and, as a large blast of powder had just been exploded in the South Yuba, it was expected that washing would be also started there by the end of January. Cedar Creek, ⅜ to 1; there is no particular change in the reports from the mine. Washing was steadily in progress, and good headway was being made in the Tunnel and Badger shaft. Sweetland Creek, 3 to 3½; in another column we give a telegram from the agent, announcing a clean-up with a profit of $3750. This run has been made exclusively on side dirt, so that the result cannot be considered unsatisfactory. Birdseye Creek, 2 to 2¼; a telegram from Mr. G. S. Powers has been received, giving particulars of a clean-up to the end of January, resulting in a profit of $5000. This is a very fair return for the first run; and, as will be seen from the report in another column, the last blast of 500 kegs of powder has thrown down a large body of gravel, which is improving in appearance as washing is going on. Shares are scarce for delivery. Oregon (pref.), 4 to 4¼; a letter from the superintendent will be found in another column. From the statement made therein it seems to be quite certain that the property will equal all that has ever been said of it, and will be one of the prizes of the year. The result of the washing without quicksilver, which was done apparently to obtain a bank to operation, is wonderfully good, and can hardly fail to leave splendid results when fairly at work.

Penstruthal, 9s. to 11s.; a course of copper is confidently looked forward to in the 46 east. Glyn, 2¼ to 2½; the orebearing part of the lode will be opened on next week. Cathedral: the lode in the engine-shaft, last valued at 4 tons of excellent copper ore per fathom, is steadily improving as the shaft is being deepened.

Great West Van, 15s. to 20s.; a lode has just been tapped in the eastern part of the mine. The lode in the 46 west continues to improve, worth 1 ton of lead per fathom and upwards. Regular sales of lead will be resumed next month.

Subjoined are the closing quotations—

Asheton, 1¾ to 2; Carn Brea, 37 to 39; Devon Great Consols, 4 to 5; Dolcoath, 37½ to 40; East Caradon, 2⅞ to 3⅛; East Van, 20½ to 20¾; Great Laxey, 17 to 17½; Great Wheal Vor, 1½ to 2; Hingston Down, ⅞ to 1⅛; Marke Valley, 3¾ to 3⅞; Pateley Bridge, 6 to 7; Parys Mountain, 19s. to 21s.; Pennerley, 1⅛ to 1¼; Port Nigel, 1¾ to 2; Penstruthal, 8s. to 10s.; Rookhope, 1½ to 1¾; Roman Gravels, 14 to 14½; Tankerville, 12 to 12½ (ex div.); Tincroft, 20 to 21; Van, 37 to 38; Van Consols, 2⅝ to 2¾; West Assheton, 2 to 2⅛; West Basset, 5 to 6; West Chiverton, 17 to 18; West Pateley Bridge, 5½ to 6; West Tankerville, 2 to 2¼; Wheal Grenville, 2 to 2⅛; Almada and Tirito, ⅝ to ⅞; Argentine, 7 to 7⅛; Birdseye Creek, 2 to 2½; Blue Tent, 4 to 4⅛; Cape Copper, 38 to 39; Cedar Creek, ⅜ to 1½; Chontales, ¼ to ½; Colorado Terrible, 1¾ to 2; Condes of Chili, 6½ to 7; Don Pedro, 3-16ths to 5 16ths; Eberhardt and Aurora, 8⅝ to 8⅞; Esmona, 2¼ to 2½; Exchequer (Gold), ½ to ¾; Javali, 10s. to 12s. 6d.; Last Chance, ⅞ to 1⅛; New Quebrada, 3⅞ to 4½; Richmond Consolidated, 6¾ to 7; St. John del Rey, 380 to 400; San Pedro, 4½ to 4¾; South Aurora, 12s. to 14s.; Sweetland Creek, 3 to 3½; Tecoma, 1⅝ to 1¾; United Mexican, 3 to 3⅛; East Lovell, 3 to 5.

THE NEW CARLEEN VOR AND WEST METAL MINING COMPANY, with a capital of 20,000*l.*, in shares of 2*l.* each, has been formed to purchase, half in cash and half in shares, the mines adjoining Great Wheal Vor, in Breage, and near the shipping port of Porthleven, Cornwall. The property, which is held for 21 years, at 1-24th royalty, and without dead-rent, extends about ¾ mile on the run of the lodes, is in the centre of a rich mineral district, and comprises six well known lodes continued from Great Wheal Vor. From Trueman's (Carleen) lode 100,000*l.* worth of tin and 20,000*l.* worth of copper have been raised, though the price of tin was lower than at present. A shaft has been sunk to 110 fms. below adit, and levels driven east and west on the lode. An adit, 100 fms. long and 20 fms. deep, has been driven for drainage. There is also a well-constructed engine house. These works have cost over 10,000*l.* The encouraging geological features of the property are that it is at the junction of the granite and killas; that an elvan course passes through both Great Wheal Vor and this company's property; and that there is an extensive bed of mundic, which can be sold at a profit, and leads to the anticipation of a large metallic deposit beneath. Capt. S. Harris, of Great Wheal Vor, reports that as to the value of the arsenical mundic he has, after careful consideration, come to the conclusion that 3 tons of picked mundic ores would make 1 ton of arsenic, the present price of which is about 8*l.* to 9*l.* per ton. But it must be understood that these arsenical ores contain tin that would pay well for dressing after it had been calcined, and could be raised in large quantites from the mine. Capt. W. R. Rutter reports that, geologically, no mining sett could have a better position. Capt. James Jenkins says that with energetic management the mines will equal the best in that extensive tin district. And Capt. William Bawdon does not hesitate to say that, in his opinion, with economy, this is the best speculation of the day. The prospectus will be found in another column.

At Swansea Ticketing, on Tuesday, 1021 tons of copper ore were sold, realising 16,617*l.* 5s. 0d. The particulars of the sale were—Average standard for 9 per cent. produce, 102*l.* 9s. 0d.; average produce, 20 1-16; average price per ton, 16*l.* 5s. 6d.; quantity of fine copper, 204 tons 17 cwts. Subjoined are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Jan. 25	1150	£105 11 6	21 3-16..	£17 17 0	16s 10d...	£84 13 6
Feb. 8	1021	102 9 0	21 1-6...	16 5 6	16 3 ...	81 2 6

Compared with the last sale, the decline has been in the standard 3*l.* 2s. 6d., and in the price per ton of ore about 13s. 2d. Messrs. Richardson report that the Cape ores gave an average produce of 27⅜, and realised 16s. 5¼d. per unit of fine copper, or 22*l.* 10s. 2d. per ton of ore. On Feb. 22 there will be offered for sale 1167 tons, from the Cape, Berehaven, Knockmahon, and elsewhere.

FROM A LONDON BROKER'S CIRCULAR.

Notwithstanding the small amount of buying on the part of the public, the tendency of markets generally is not unfavourable. Among English railways, Caledonian and Metropolitan District have met with considerable attention, and both stocks show an appreciable advance in price. Great Western have also improved on anticipations of a favourable dividend. The traffic returns issued this week were satisfactory, those of Great Western, Great Northern, and London and North Western Railways, especially so. The announcement of the London and North Western dividend at the rate of 7¼ per cent. created rather a better feeling in the market, and brought in a few buyers. In the Telegraph market, Anglo-American stock was in demand in the early part of the week, purchases being made in favour of the "A" and "B" scheme; the rise, however, was not maintained, and the stock is about 1¼ below the highest point. The foreign market is quiet, the principal changes being in Egyptian, San Domingo, and Argentine, which show a decline for the week, Egyptian having relapsed on the announcement of arrangements having been made for further loans. Turkish securities are better, an improvement taking place on the Austrian "Note" being accepted by Turkey. The amount of business doing is very limited. The account being settled to-day is one of the smallest for some time past. J. Y. WATSON, jun.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—The Ventilation of Coal Mines (David Burns); Swedish Iron Ore; the Emma Mine; London and California Mining Company; Parys Mountain Mine; Valuable Discovery of Lead in Yorkshire (William Newbould); Separation of Minerals; "Circular" Mining—North Laxey and Assheton Mines; Mining in Cardiganshire (Sampson Trevethan); Gold in Wales (T. A. Readwin); the Future of Tin Mining in Cornwall (W. Tregay); Wheal Grenville (F. L. A. T. Rodda); Old Treburgeft Mining Company. Foreign Mining and Metallurgy; Concentrating Tailings from Quartz Mines; the Monetary Question in the United States; the Bonanza Mines of Nevada; Hydraulic Gold Mines of California—Cedar Creek. Foreign Mines.—Meetings of the New British Iron, Imperial Brazilian Collieries, Welsh Freehold Coal and Iron, Glasgow Caradon Copper, Talybont Silver-Lead, Mwyndy Iron Ore, Tyllwyd Silver-Lead, and Glan Clwyd Lead Companies.

ROOKHOPE.—Mr. Blenkiron has had an inte view with the new directors this week, and gives a very satisfactory account of the mine. It appears that hitherto the lode has been worked away on one side of the levels only, but lately a few short cross-cuts have been made on the other side, and it is found that good lead ground is standing untouched there also, better in some places than any on the other side of the level was, so that it is believed that quite as much ore is still standing by the side of the levels driven as has been taken from the mine. This is a most important discovery, and will probably lead to large returns being made quickly. A number of other interesting points will be attended to, which will lay open additional ore ground and augment the returns considerably. Mr. Blenkiron considers that one-half the money now raised will be ample to bring this part of the property (Stotsfield Burn) into a good permanent paying state.

NORTH LAXEY.—On the 3rd inst. Capt. Rowe, the manager, wrote, "I am well pleased with the lode at the shaft, more on account of its increased size than anything else. When we started to sink below the 121 the lode was not 6 in. wide, and nothing in it; now it is 4 ft. wide, and all good stuff for the washings. This state of things has occurred earlier than I expected. The 110, south of north shaft, went through by far the largest and best looking lode we ever saw in the mine, and in its gradual dip northwards the finest of this ground is now coming into the shaft. I did not expect it so soon. I thought it would be more likely to be met with in the next sinking after this. As things are now, by every appearance the shaft is bound to go down regularly through a lode altogether different from anything we have had before as to size, character, and value." Since then the lode has been valued at from 15 cwts to upwards of 1 ton per fathom, and samples of the same have been sent to the office. On the 7th inst. the resident agent, Capt. Sowden, after referring to the lode having been worth fully 1 ton per fm., says—"The lode in the bottom of the shaft is the best thing ever seen in North Laxey." Capt. Rowe again wrote on the 8th—"It is my decided opinion that we have the main bearing lode of Great Laxey in North Laxey." Capt. Rowe having been for 25 years or more the active general manager of Great Laxey, as well as in the same position for many years past at North Laxey, no one is entitled to speak with such authority on the subject as he is.

WEST TANKERVILLE.—There has been sold this week 20 tons of lead ore, at 15*l.* 7s. 6d. per ton, and 20 tons of blende, at 5*l.* 5s. per ton, making together 405*l.* for the month. We understand that this fully pays the working cost, including nearly 200*l.* per month spent on the Wood vein part of the property, which is not yet productive. The returns are likely to be increased very soon. The 63 south is worth 15*l.* per fathom; the stopes in this level, 30*l.*; the 50 south, 30*l.*; No. 1 stope in the 50, 30*l.*; No. 2 stope, 22*l.*; No. 3 stope, 30*l.*; and the stope in the 46, 35*l.* per fathom. In a few days the winze will be holed to the 63, and men put to stope in ground worth 30*l.* per fathom. An important discovery is looked for daily in the old part of the mine.

TREBEIGH CONSOLS.—The new shaft is being sunk by a full force of men to intersect the silver lode at the 20, which point is looked forward to with much interest from the richness of the lode in the adit level.

WEST CRAVEN MOOR MINES.—The lumps of almost solid lead referred to in the manager's report, which will be found under the head of "Mining Correspondence" in this day's Journal, can be viewed at the offices of the company.

BRITISH LEAD MINES.—Mr. Murchison has published a third edition of his pamphlet this week. He refers to the intended announcement of his publication having appeared in October last, and the issue of the first edition having taken place in December, and he remarks that, though the recent very valuable discovery at East Van has, no doubt, given an impetus to speculation, he feels entitled to take credit for having at last awakened the public mind to the importance and very profitable nature of British lead mining. In his last edition Mr. Murchison stated that the New Year opened with very encouraging prospects for this industry, and that those who took the earliest advantage of these views would probably benefit the most. In three weeks his anticipations have been amply realised, for, not only have East Van shares risen from 3*l.* to 22*l.*—an aggregate advance of 285,000*l.*—but the shares of other promising lead mines, of which he wrote favourably, have emerged from a dormant state, and are now largely dealt in at something beyond nominal quotations, though most of them are still at moderate prices, and much below what they have been, leaving room for reasonable advance as the properties become developed, and show fair probabilities of further success. Mr. Murchison feels justified in predicting that during the present year (1876) the aggregate amount divided by British lead will be larger than in any one year hitherto. For many years Mr. Murchison stood alone in his public and persistent advocacy of the superiority of lead mining, and for a long time he failed to influence those who were wedded to the copper and tin mines of Cornwall. Eventually, however, some of them listened to his advice, and by his introduction have since made considerable fortunes.

TYLLWYD.—An extraordinary general meeting was held on Thursday, when the shareholders expressed themselves as satisfied with the explanations given by the directors, and unanimously resolved to subscribe the necessary capital for carrying on the mine. Arrangements have been made with Mr. Walter Eddy to have a general superintendent of the mine along with Capt. Paull. The announcement of this was received with much satisfaction by the shareholders.

BRYN ALYN LEAD MINE, NORTH WALES.—Another fine discovery was made at this mine yesterday. Rib of solid ore in lode worth from 40*l.* to 50*l.* per fathom, and improving.

Mr. Edward Field, C.E., has taken into partnership his brother, Mr. Walter Field, and Mr. F. M. Cotton, M.I.M.E., who have been engaged with him for many years; and the business hitherto carried on by him as consulting engineer will be continued under the style of FIELD, FIELD, and COTTON, Consulting Engineers, Chandos Chambers, Adelphi, W.C.

The Union Railway Carriage and Wagon Company (Chorley, Lancashire) annual meeting was held on Feb. 3, when a dividend was declared after the rate of 10 per cent. per annum.

The report of the Van Railway Company for the half-year shows a net profit of 525*l.*, which, with the balance brought forward, makes 1807*l.* available for the payment of a dividend for the half-year, at the rate of 4 per cent. per annum, leaving a balance of 1407*l.* applicable to the redemption of the sum of 1142*l.* disbursed in excess of paid-up capital.

A petition for the compulsory winding-up of the Duffryn Rhondda Coal and Coke Company (Limited) came before the Master of the Rolls on Saturday. The petitioner was Mr. James Jartick, of Garth-house, Bassaleg, near Newport, Monmouthshire. The usual order was made.

A petition to wind-up the Trimsarain Coal, Iron, and Steel Company (Limited) has been presented to the High Court of Justice.

A petition to wind-up the Garw Valley Collieries Company (Limited) has been presented to the High Court of Justice.

Notices to Correspondents.

WELL-PAID DIRECTORS.—There are only three directors and a managing director of the Credit Foncier of England. They charge the company 3000*l.* per annum; besides, in their report just sent to the shareholders, there is an additional sum put down for salaries 2714*l.* 3s. 5d. Now, this is the second half-year in which no dividend has been paid, although they have been carried forward to the next account. It appears to me when at the best they only pay 5 per cent., which is virtually only 2½ per cent. on the reduced investment, a more moderate remuneration might satisfy these gentlemen, who ought also to reduce the enormous items for extra salaries.—A SUFFERER.

THE TECOMA SILVER MINING COMPANY (LIMITED).—In the latter half of the report published in last week's Journal a slight omission occured. The sentence should have been—"This body of ore is very encouraging, and should it on working out only prove a pipe of ore, *it is still of a most encouraging character, as we may confidently expect to find a continuance of pipes and bodies of ore.*" The words in italics are those which were omitted; and I shall feel obliged if you will kindly supply them, with this explantion, in your next issue.—W. H. HARRISON, Secretary: *Palmerston Buildings, Bishopsgate street, London, Feb.* 10.

PEAT AND COAL FUEL.—Can any correspondent inform me whether artificial fuel composed of an admixture of peat and coal slack, has been brought into the London market, and, if so, at what price as compared with (say) best Wallsend coal it was sold? I am anxious for the information, as I believe I could command a peat bog within easy reach of cheap slack; but the manufactured fuel could not be put in the market less than 14s. or 15s. per ton wholesale.—K. S. R.

WHEAL GRENVILLE.—The second letter of "Benny Popputhed, Trebutter," shall appear next week.

WEST POLDICE.—In last week's Journal it was stated that Mr. T. M. Hawke was in the chair. This was an error: as Sir F. M. Williams, Bart., M.P., the purser of the mine, presided.

IRON INDUSTRIES OF SOUTH WALES.—The paper by Mr. Meade on this subject shall appear in next week's Journal.

Received,—"N. W. P." (New York): We are always glad to receive such information—"T. H." (Durham)—"J. W. S." (West Hartl-pool)—"G. A."—"H. P." —(Rhayader)—15, Trinity-square, Tower Hill—"A. H." (Dulwich): We believe both of the companies are defunct—"J. T." (Pendleton)—"W. N."—"G. S."—"E. B." (Islington)—"G.:" We fear you will have to pay; but you had better consult a solicitor, as it is a matter on which we should not like to give advice—"T. W. B."—"Shareholder" (Wheal Coates)—"M. B. G.:" Yes—"Reader" (Carnarvon)—"J. M. S." (Philadelphia)—F. A. Page (California)—"J. B." (Paris)—"Shareholder" (Van Consols).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, FEBRUARY 12, 1876.

THE LATE STRIKE IN WALES, AND THE SLIDING SCALE.

The internecine struggle which took place in the South Wales district some year or two since between the employer and the employed entailed a sad legacy upon the whole commercial community. Not only were the long-established staple trades, employing their ten of thousands of hands, diverted from their usual channels, not only were gigantic establishments broken up, and the puddlers, furnacemen, and others driven from their homes, but a bitter feeling of animosity between masters and men engendered which has not yet passed away, even should the amicable relationships which formerly existed ever be re-established. Whatever may be the ultimate issue of the struggle, Messrs. MACDONALD, HALLIDAY, and other Trade Union agitators have much to answer for in the present unsatisfactory condition of the chief industries of South Wales, and the men have, unquestionably, had sad cause for regret that they lent a too willing ear to the specious arguments and false hopes held out to them by interested partizans in the perpetuation of the struggle. We have ever been ready to accord to the collier, the puddler, and the working classes generally the fullest liberty to obtain the highest price they possible can for their labour. It is their only stock-in-trade, and, consequently, they have the fullest right to dispose of that stock-in-trade in the best market—nay, it is justly argued that the men may properly and legitimately combine together for the purpose of sustaining the price of labour, but our contention was then, and still is, that the Unionists persisted in their demands in the face of rapidly falling markets—that they defiantly resisted abating a jot or title the position they had attained, even when facts and figures conclusively proved that the current prices of iron and coal demanded reductions in the wage-rate, and that in consequence of the persistent refusal of the men to submit to the exigencies of the times employers had no alternative but to decline the acceptance of orders, and gigantic works and extensive colliers were for some time at a complete standstill.

The longest lane, however, has a turning, and after a most disastrous and prolonged struggle reason prevailed, and both parties sought means by which the breach could be healed. After a good deal of higgling a joint committee of masters and men has been formed for the purpose of endeavouring to agree upon the adoption of a "sliding scale," by which the rate of wages for the cutting of coal should be fixed. It was, indeed, a great step on the part of the employers towards reconciliation to have sanctioned such proposal, and showed their great desire for the re-establishment of peace almost upon any terms. To throw the whole of their books open to a committee of working men, and to have their business relationships exposed, proved that they were not afraid of the position they had advanced—that wages were far too high to hope for or expect a revival of trade. This committee has been sitting for some time past, and has made some progress, and report is current to the effect that they have recommended, or shortly will recommend, a general reduction of wages to the extent of from 10 to 15 per cent. upon those now current, and these figures will reign for the next five months—until Midsummer—when the same complex and delicate work of examining books, &c., will have to be again undertaken, in order to fix the rate of wages for the ensuing six months.

Both parties having thus shown their desire to re-adjust their differences, and for the resumption of amicable relationship, we should be the last to throw cold water upon any scheme having such a laudable object in view. We believe that an honest endeavour will be made to give practical test to the adoption of the sliding scale as propounded by this joint committee, but, at the same time, there are so many difficulties in the general adoption of the scheme that we may, perhaps, be pardoned in the expression of our belief when we say that we fear it will be found impracticable in the working, and that we shall have to look to some other means for the permanent re-establishment of working relations. It must be obvious to the merest tyro in colliery operations that there are scarcely two collieries, even in the same district, which can be worked upon the same basis. If a certain price per ton be the fixed standard for the regulation of wages, a pertinent and important consideration is—Does that fixed price mean at the mouth of the pit, at the nearest port of shipment, or the nearest factory where consumed? In some collieries the carriage of coal to the port of embarkation, or the factory or works where consumed, is as much, if not a more, important consideration than the cost of cutting, whilst in others the item for transit is virtually *nil*. Then again, the cost of timber, the hardness and thickness of seam, and the nature of the roof essentially differ, so that we can scarcely conceive how any fixed standard can be established which shall form the basis of any sliding scale which shall do justice between master and man. The Hendreforgan Colliery Company have already withdrawn from the Masters' Association, objecting to the award of the sliding scale committee as applicable to the anthracite or stone coal collieries. They maintain that the prices of the Upper Four-feet seam of the Aberdare steam coal is affected by the probability of war, whereas the price of anthracite is ruled by the price of barley and the prospects of harvest, &c. We reiterate that we by no means ignore the labours of the sliding scale committee, or the evident desire to re-establish relationships between employers and men. Concessions on both parts will probably be made, and a most earnest desire evinced to give the sliding scale a practical test, but the difficulties are so obvious that we doubt whether success will crown these efforts. The colliery owners themselves must assuredly be the best judges of their own affairs, having a knowledge of all the circumstances which are exceptional to themselves; and unless the working collier can be induced to place the same implicit confidence in the fairness and justice of his employer as in former days, we are seriously afraid that the so-called peace, based upon any sliding scale, will be found to fail in the time of emergency, and commercial relationships and all their attendant evils be once more endangered.

AMERICAN COAL.

Attention has been somewhat directed of late to the block coal field of Indiana. The field in question is situated in the south-west of the State, and it is bounded on the south by the Ohio river, and on the north by the Ohio and Mississippi Railroad; it is also penetrated by three different lines of railway now in course of construction. The district may thus be said to have been hitherto destitute of railway facilities. As it is now about to be provided with them, it is expected that an important future is in store for it. Block coal, although regarded by some as the best practical fuel, especially for the manufacture of pig, is not generally abundant in the United States. Only two deposits are said to be commercially known—that lying in North-Eastern Ohio and Western Pennsylvania, and that of Indiana, of which the territory under consideration comprises the chief accessible and continuous deposit. The block coal of Indiana is the most desirable of all fuel for the blast-furnace, because it is a natural fuel, which without any preparation will produce in the most economical manner the highest grades of metal possible with any given ore and furnace. The late Prof. FOSTER, of Chicago, stated in one of the reports which conferred eminence upon him as a geologist that the block coal of the South-Western Indiana field excels that of the Northern field in hardness, while it is equal, if not superior, in other respects.

Not only does Indiana thus possess, according to available evidence, good blast-furnace coal, but she has also limestone in any quantity, and an abundance of ironstone is further stated to be within easy reach. Foremost upon the list of commercially accessible ores may be placed the celebrated Iron Mountain ore. This is at present sold at St. Louis at $6 per ton, and it can be conveyed to Rockfort, so as to be available for reduction with Indiana block coal for from $2 to $2½ per ton. Large quantities of this ore are used in Pittsburg and Wheeling, although the lowest freights to those points are twice as large as those named to Rockfort. Merrimac ore is also shipped from St. Louis at $5½ per ton, and Pilot Knob at a still lower price, although these ores are less desirable, even at low rates. Fine hematite ores, again, can be procured in abundance in South-Eastern Missouri, in Western Tennessee, and in Kentucky, and should constitute a natural—perhaps the most natural—supply for Southern Indiana furnaces.

Details such as these would seem to show that Indiana possesses the means of becoming an important centre of the iron manufacture. But, however great may be the natural metallurgical resources of Indiana, they must be supplemented by other indispensable conditions, such as credit, industry, patience, and a well sustained demand for manufactured iron or pig when produced. The very profusion of resources with which Nature appears to have endowed the United States seems at the same time to have made the Americans careless of that mainspring and mainstay of commerce and industry—credit. The short-sighted policy which has repudiated debt or trifled with recorded obligations has frightened away capital and chilled industrial effort. Not only is the average American careless in the all-important matter of public credit, but he probably spends his money rather more freely than the average European, and the consequence is that American capital does not accumulate very rapidly. At any rate the accumulation of American capital does not keep pace with the development of American resources, and the Americans are fain accordingly to import capital from Great Britain and Europe. The European capitalist who lends his money to American undertakings has to make the living pay for the dead, and he does this by exacting a severe rate of interest. The result is that large sums are drained away from the United States in interest payments, and this again checks the accumulation of wealth among the Americans. All these are circumstances which must be taken into account in connection with the interesting question of the utilisation of the block coal of Indiana.

THE EXPLOSIVE OF THE FUTURE.

New explosives are being invented almost every day, and dozens of old ones are in open competition for the favours of the miner. In consequence there is great danger that the users of explosives will be continually trying new compounds, and losing much valuable time, to give apparently fair play to some of them which are not suited to their purpose, while a little consideration on the nature of the proposed explosive might, *a priori*, settle almost the question immediately.

The qualities required of an explosive are, as a matter of course—

1st.—Strength. 3d.—Absence of noxious gases.
2d.—Safety. 4th.—Cheapness.

Let us examine the divers compounds known under these four views, and if an explosive can be ascertained to possess at once these four characteristics in the highest degree, it ought to be pronounced "the Explosive of the Future," and will thereby deserve the earnest attention of the consumer.

Strength comes almost first in the estimation of all miners, and with some good reasons, and in practice strength is found to appertain exactly to the explosive which theory points out as the strongest. Theory shows that three qualities are required to make an explosive strong, viz.:—

1st.—A given weight, or it must give a large amount of heat on explosion.

2d.—It must occupy the smallest possible space.

3d.—The explosion must communicate through the mass of the charge in the shortest possible time.

The quantity of heat given out by the unit weight of the explosive is really the force which, if applied in the smallest space and in the smallest time, will give the maximum disrupting or projecting effect.

All physicists know how to arrive by computation at the amount of heat a given explosive will disengage on explosion, and the *modus operandi* of such computation, together with examples, are well explained in a memoir, by M. Berthelot, on "Explosive Substances." In M. Berthelot's concluding table on the amount of heat given out by the explosion of divers substances we find the following figures, which may be taken as types of their classes:—

1st.—Gunpowder, average	600 units.
2d.—Gunpowder, chlorated	1000
3d.—Nitroglycerine, pure	1320
4th.—Guncotton	590
5th.—Guncotton, chlorated	1420

The class gunpowder may be taken to cover all those explosives which are simple mixtures—more or less incorporated—and do not contain a sufficient quantity of a nitro-compound to be detonated.

Gunpowder chlorated is gunpowder in which the nitre is replaced by chlorate of potassium. It is too dangerous to make and use.

Pure nitroglycerine gives out a very large amount of heat, but is also a most dangerous substance. All the explosives containing this substance—such as dynamite, lithofracteur, &c.—will give an amount of heat proportionate to the quantity of nitroglycerine in the composition: for instance, dynamite as usually understood and containing 75 per cent. of nitroglycerine will give 980 units. Lithofracteur gives more heat, according to its composition; but the ingredients of gunpowder which enter into its composition, and especially sulphur, are most unsuited to form a chemically stable substance.

Guncotton, with its 590 units, makes rather a poor appearance, and keeps itself in the market on the score of its safety, and the high rate of its explosion gives it a great advantage over gunpowder in short holes. The substance known as Patent Gunpowder belongs to this class of explosives.

Guncotton becomes very much stronger if mixed with an oxidising substance, the best effect being obtained by using about equal weight of guncotton and chlorate of potassium, but anything that contains a chlorate must be put down as especially dangerous. The next best mixture is guncotton, with nitrate of baryta—that is, "Cotton Powder," which gives about 995 units of heat, or a little over dynamite; this nitrate of baryta offers some very interesting peculiarities which make it thoroughly suited to its application. It contains the greatest amount of oxygen under the same volume; it is very ready under the detonator, but being very dense it is but slow in ordinary combustion, so that a cylinder of dry cotton powder burns by inflammation like a common pitch torch.

Another advantage of the composition of the Cotton Powder, or "Tonite," as it is called on the Continent, is that the nitrate of baryta resolving itself upon explosion into carbonate of baryta or heavy earth, it takes down in a few seconds all the smoke, vapour, and carbonic acid gas that are generated by all explosives. Cotton Powder on this account, and giving the greatest amount of heat of all explosives, is, therefore, on that score the "Explosive of the Future." But let us not anticipate, and proceed to the other views as enumerated above.

The next point effecting the strength of an explosive is its compactness; this point is settled by the density of the charge, thus—

Gunpowder	1 or a trifle over.
Dynamite	1·50
Cotton Powder	1·50 to 2·00
Guncotton and Patent Gunpowder	1 or under.

The explosive of the highest density, occupying the smallest space, gives on that score the greatest pressure, all other circumstances being alike. Dynamite, being pasty in its ordinary condition, fills a bore-hole somewhat better, but this is counterbalanced by the danger of smearing the hole sides when rammed down, which causes a certain amount of the unexploded substance to be blown out with the tamping, and is afterwards breathed by the miner, while Cotton Powder is easily made to fit by using moist clay or water, so as to fill any vacuity.

We come, now, to the third point affecting strength—that is, the rate of explosion. This is of great importance, for this characteristic gives an explanation to a great discrepancy in the theoretical computations as expounded by every inventor, who bases his reckonings merely on heat and space; and the proof of this is apparent when we consider that the heat given out by the waste nitrate mixtures is only one-half below that of nitroglycerine, while its mining effects are very often but one-tenth of the effects of the latter.

All nitrate mixtures of the gunpowder type inflame and explode through a spark, or flame penetrating gradually between the grains and burning from the surface of the grains inwards. This explains the low pressure given under a tamping, or projectile, small enough to be removed easily at a comparatively slow speed. The rate of burning can be measured by a chronograph when the charge is burned in a cannon, and is a very appreciable part of a second. All nitro-compounds—such as nitro-glycerine, gun-cotton, and Cotton Powder—explode through the mass, and the transmission of the detonating effect can be compared to the atmospheric waves when transmitting sound. This explains why nitro-compounds can be used without apparent tamping, their own mass and that of the adjoining atmosphere being sufficient to produce the retroactive effect. All nitro-compounds are on the same footing in that respect.

In conclusion of the examination of the cause tending to give an explosive the greatest strength, it is opportune to mention that Cotton Powder gives the greatest amount of heat; it is the densest, and is equal to the others of the nitro-compound class in its rate of explosion. Some physicists introduce in their comparative computations the quantity of gas given on explosion, but this is found to be unnecessary, as heat alone is force, irrespective of the quality of the medium used, although the quality of this medium interferes with the initial pressure. But the quality of the gases does not vary much amongst the divers explosives claiming the attention of the miner.

An eminent man who has done much towards endowing industry with a powerful explosive, and whose researches have greatly aided in throwing light in the way this article attempts to follow, is Mr. Alfred Nobel. This gentleman has experimented with almost all the explosives known, and in a lecture before the Society of Arts he gives publicity to his researches. It is very interesting to see how the results obtained by Mr. A. Nobel tally with the above findings. Let us take Mr. Nobel's figures in a simple form, taking nitroglycerine as the strongest explosive practically known, and putting at the comparative figure, 300; then the others follow suit with their respective marks, thus—Lithofracteur, 150; Dynamite, No. 1, 217; Abel's Guncotton, compressed to a density of 1, 215; and on the same page of the report of the proceedings he goes on to show that guncotton of density 1 is less than half the strength of nitroglycerine, bulk for bulk, on account of the superior density of the latter. For the same reason Cotton Powder, when used as in slate quarries, with a density of about ·900, comes off with a figure of 186; but with a density of 1·50 to 2 that figure would exceed that of dynamite. Mr. A. Nobel's figures are, however, under a disadvantage—that is, of not being obtained by practical means. They were obtained by firing a very small charge in the centre of the bore of a large mortar, so that those explosives which require tamping were under a disadvantage; but with the exception that they show dynamite to be much superior to lithofracteur, which is evidently an error, we can take his table as a check upon the foregoing.

So, from the above, the deductions are that the order of merit for each explosive is (beginning with the strongest)—

1st.—Cotton Powder, density about 1·50.
2d.—Lithofracteur.
3d.—Dynamite, with 75 por cent. of nitroglycerine.
4th.—Guncotton (Abel's) } ..... 1.
5th.—Patent Gunpowder }

Curtis and Harvey's extra strong blasting powder exploded with detonator or strong firing cap, giving about one-half the effect of No. 5.

We now come to the second quality required by an explosive to command the attention of the miner after strength—that is safety. In discussing this point it will be advantageous, for the sake of shortness, to couple it with the third requirement—that is, absence of noxious gases or fumes.

The chemical stability of the compound, the facility with which it can be made pure, and the resulting products of the explosion will be materials required before the question can be settled.

The chemical stability of gunpowder is admitted by all, if it is well made and the sulphur free from sulphurous acid. The temperature at which it will explode is also very satisfactory, but its hardness renders it liable to fire by friction, and it is also easily fired by a spark; and, when so fired in large quantities, or in a bore-hole, may cause serious accident.

Amongst the nitro-compounds two principal classes exist—first class based upon nitroglycerine, and that based upon guncotton. Their stability depends upon the affinity with which they are compounded, and as the kind of reaction which takes place on the glycerine or cotton being turned respectively into nitroglycerine and guncotton is similar, this affinity can easily be compared. This has been done by M. Berthelot, who found that the stability of the cotton compound is theoretically four times that of the nitroglycerine class, and this is borne out by experience, as it is well known that the guncotton compounds, such as Cotton Powder, require a much stronger detonator to fire them than those required by dynamite—that is, the Cotton Powder can stand a greater heat or more friction than dynamite. The Cotton Powder is also safer than its congeners guncotton or patent gunpowder, as it is mixed with a peculiar nitrate, very dense and very slow to burn. The charges of Cotton Powder being also entirely covered with a waterproofing coat they are free from ignition by sparks.

Common gunpowder gives out on explosion a large volume of smoke not particularly injurious, but very annoying in underground mines. Dynamite gives out steam, nitrogen, carbonic acid gas, nitrous oxide, and often a large portion of the charge having been smeared against the sides of the holes, and escaping explosion, is blown about in fine dust and breathed by the miner, hence the serious effect the use of this explosive has on the health of the miner. Lithofracteur is in the same category, with the additional drawback mentioned above, and caused by the sulphur. Guncotton and patent gunpowder give on explosion steam, nitrogen, carbonic acid, and carbonic oxide. This latter is the dangerous element, as it is evolved in large quantities, and is of itself when mixed with

n explosive, and has caused serious accidents, whilst it is very ous.

otton Powder leaves nothing but steam, nitrogen, and a residue of arbonate of baryta or heavy earth, which falls to the ground im- iately, leaving the atmosphere as it found it.

he perfection of this compound is guaranteed by the resources of dern science, and the facility with which each of its ingredients be purified. Suffice it to say that Cotton Powder being made up very finely crushed guncotton, is very easy to wash, and the ess of purifying as carried on at Faversham is so ample that guncotton is generally pure after two hours washing, but is wed to wash for many days for the sake of extra safety, as it but very little more to do so.

eapness means evidently the comparative cost for work done, the certainty and handiness with which a hole can be charged. evident that the strongest explosive ready in solid charges, ctly waterproof, and sold at the same price as the well-known ted articles, is the cheapest, because more work in a given time ne with it. In a comparative review, such as this, of the "Explo- ive of the Future," it is also necessary to ascertain the future cost rice of the explosive. The writer is in a position to assert that Cotton Powder will be ultimately supplied at a price which will defy all competition, and but a short time is necessary to prove it, so that Cotton Powder has on that score, as well as on other con- siderations, a right to the title which heads this article.

CUMBERLAND PENCIL LEAD.—For many years the plumbago from the Borrodale mines enjoyed an absolute monopoly in the sup- ply of pencil lead to the first-class manufacturers, and the reputa- tion of the lead pencils made with it was so generally recognised that they commanded a ready sale at very high prices in all coun- tries to which they were sent. The district whence this beautifully pure lead is obtained is situated in the south-east part of Cumber- land, bordering on Westmoreland, Borrodale itself being a romantic valley among the Derwent waterfalls, by which name is designated a range containing some of the loftiest hills in England. It is in one of these hills that the celebrated Borrodale pencil lead is found, and so lucrative was the working of this valuable and unique mineral to the owners that previous to the collapse some 20 years ago of the company into which the proprietors had formed themselves it was the custom to open the mines but once in seven years, carefully closing them up again when the necessary supply had been extracted. For many years past the Borrodale lead has been altogether un- known in the market, and hence the opinion has become general that the mines were exhausted; so far, however, from this being the case, it appears that the deposits are quite as pure, and probably more extensive, than when Mr. Farey, a celebrated mining engineer of the period, reported upon them half-a-century ago. During the past week Mr. William Salmon, F.G.S., who is at present interested in the property, has had large samples in London, and has taken the opportunity of submitting them to Mr. Robert Hunt, F.R.S., and to Prof. Warington Smyth, who in his lectures had referred to the reported exhaustion of the mines. Both these gentlemen are un- derstood to have expressed themselves perfectly satisfied with the purity of the samples, of which, indeed, there can be little doubt, inasmuch as a practical pencil maker has offered 14s. per lb. for the pick of them. Attention is again directed to the district, and it is believed a report to the Government by Mr. J. Clifton Ward, of the Geological Survey will shortly be published. That the mineral re- sources of the entire district are well worthy of development there can be little question, and an early opportunity will be taken to give the readers of the Journal the fullest details concerning them.

COAL AND IRON IN THE UNITED STATES.—In connection with the Boston coal trade it may be noted that English cannel has been selling in small lots at $24, and Scotch and American cannel at $10 to $12 per ton. In Cumberland and gas coal there have been no transactions, and prices are unchanged. Anthracite has been in steady but moderate retail demand, with sales at $7·50 to $8·25 per ton. At a meeting of coal carrying and producing interests held at the office of the Delaware and Hudson Canal Company, at New York, it was agreed that in consequence of over-production and an ac- cumulation of unsold stock upon the markets, an entire suspension of all mining of anthracite coal for five weeks, from Feb. 17 to March 11 inclusive, should be ordered. The iron trade has continued dull at Philadelphia; hopes and anticipations are, however, enter- tained that an improvement will be witnessed as the year advances.

REPORT FROM CORNWALL.

Feb. 10.—It was possibly a wise act on the part of the smelters last week not to encourage expectations that might have been un- founded by advancing the standard, though, as a matter of fact, the latest official prices are no longer in force. At the same time, the action taken at the last Banca sale appears to indicate that the lowest depth has been fathomed. Such prospects of a change as these are, consequently, hopeful, and yet so cautious have people become that we have known instances in which promising speculations with regard to the purchase of tin afloat on account have been suffered to pass, though they required only a comparatively small advance to make them pay handsomely.

Once more we are told that the Perran Iron Mines are to be set on work, and this time the intimation is accompanied by the state- ment of the payment of substantial deposits. At length, therefore, we may hope that this promising undertaking has emerged from its difficulties; these have been many and great, but it must be borne in mind that they have nothing to do with the mine itself.

Breage was, it is said, the first locality in Cornwall in which china- clay was discovered, and, whether this be so or not, there is no doubt that it presents a promising field for clay working, the extension of which might in some respects make up for the depression in the mining of the district. Such an expectation may not be fully rea- lised, but it is satisfactory to note that a new china-clay company to operate in that locality has been formed.

There is to be a new trial concerning the case to which we alluded last week, which, on an action brought by the Corporation of Penryn against Mr. Holm, raises the important question of the right of the Duchy of Cornwall to the foreshores of the county within the Duchy. It came before the High Court of Justice by way of appeal from the judgment of Mr. Montagu Bere, Q.C., the judge of the County Court of Cornwall, on an action which was brought to recover moneys al- leged to be due from the defendant to the plaintiffs for the use and occupation of a piece of foreshore—part of Penryn Creek, and ad- jacent to, but distinct from, another piece of foreshore leased to de- fendant by the Ecclesiastical Commissioners. Mr. Bere had, on Dec. 16, 1875, delivered judgment, raising points for determination by the Superior Court—first, whether there was evidence that he, sitting as a judge, ought to have found that the soil of Penryn Creek was the property of the Ecclesiastical Commissioners, as represent- ing the See of Exeter: and secondly, whether the 8th section of the 21st and 22nd Vic., c. 109, was intended to pass, and did pass, all foreshore and soil of tidal rivers in the county of Cornwall from the Crown to the Duchy, or only such portion of such foreshore and soil as lay above mines, minerals, and substrata? He decided the first point in the negative and the second in the affirmative, giving to the Duchy the larger right; but for the purpose of ensuring an appeal he entered a verdict for the defendant. After some dis- cussion their lordships decided that instead of remitting the case the verdict should be set aside, and that there should be a new trial, in order that the investigation might be full and complete.

Although unconnected with mining, Mr. John Davey, of Craft- hole, was so well known in the county of Cornwall, and so eminently a representative practical man, that his decease at the age of 61 calls for notice here. Mr. Davey several years ago turned his at- tention to the improvement of agricultural implements, and attained such excellence that he made the names of Davey and of Crafthole (his residence) known all over the kingdom, whilst the demand for his implements extended also to different parts of Europe and America. One of his best known inventions was the "Excelsior" plough, which was adopted by some of the leading English im- plement makers, and manufactured by them under license. When public opinion began to turn in the direction of double ploughs, Mr. Davey took that form of implement in hand, and eventually produced in the "Climax" what is unques- tionably the best double-furrow for general purposes in existence. Horse-hoes and harrows, cultivators, and whippletrees—in short, almost all the implements of general husbandry which can be manufactured of iron, were made and improved by him; and the value of his improvements is attested by the fact that they car- ried off the highest prizes at shows of all kinds up to that of the Royal Agricul- tural Society. A self-made man, Mr. Davey's career was marked, not only by genius and industry, but by a thorough conscientiousness and a manly integrity that won the respect of all who knew him.

A sad accident occurred at Holmbush Mine last Friday, which resulted in the death of two men, named Pascoe and Guest, living near Downgate, in Stokeclimsland. The deceased men, with two others, were working in Flat Jack shaft clearing away rubbish in the pass, when a quantity of ground fell away, burying three out of the four. One of the men, named Harvey, escaped injury, and got to the surface for assistance. Mr. Littleton, surgeon, of Callington, was quickly in attendance, but before the men could be brought to the surface Pascoe and Guest were both dead. Both men leave widows and families. Guest's son was working with him at the time, being the man injured. His collarbone was fractured, and he was besides much bruised and shaken by the accident.

Mr. Henderson, C.E., of Truro, a gentlemen well known in mining circles, has established a new industry on Dartmoor—"natural ice making." With the extension of the fish trade the local demand for ice increases, it being placed in the pads of fish to preserve them in transit per railway. And the quantity of ice used is so great that not only is it imported in considerable quantities, but made artificially on a very large scale. The idea occurred to Mr. Henderson that under those circumstances the best thing to do would be to establish a natural ice factory on Dartmoor, and accordingly this has been done. The South-Western Railway between Okehampton and Lydford crosses the flank of Sourton Tor, at a point some 900 ft. above sea level. The summit of the Tor is 500 ft. over this, and here Mr. Henderson has a series of ponds, 30 in number, and an acre in extent. They are brickwided, lined with cement, turfed to the edge—models, in short, of neatness in construction and arrangement, and make the hill top something like a gigantic chessboard. They are 3 ft. deep, filled with water from a pure and abundant spring, and hard by is the ice store, capable of containing several hundred tons. When there is a heavy frost these ponds freeze to a depth of several inches, and the ice—which is beauti- fully clean, is cut out in solid blocks and stored. From the store to the railway is but a short distance, and all down hill, and Sourton is pretty near equidistant by rail from Plymouth, Exeter, and Barnstaple.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Feb. 10.—In the South Staffordshire Iron Trade this week the chief feature has been the easier tendency of common sheets, espe cially of the class used for galvanising purposes. Although the quoted rates remain at 11*l.* to 11*l.* 5s. per ton, it is no secret that good orders are to be placed at somewhat under that figure. Good sheets, especially of thin gauges, are, on the other hand, very firm, and prices for noted brands range from 14*l.* per ton for single, and upwards. Boiler plates are in quieter demand, owing in a great measure to the success of competitors in more favoured centres of production. Quotations for general finished iron remain on the standard of 8*l.* for common and 10*l.* for branded bars. The pig-iron trade is in a very unsatisfactory condition, and stocks are accumu- lating at many of the furnaces up and down the district. The Chil- lington Iron Company and Messrs. Thorneycroft and Co. are each about to blow out another of their furnaces, finding it cheaper and altogether more to their advantage to buy pigs from the North Coun- try for the supply of their own forges than to smelt in their own furnaces. The expenses attendant on the pig-iron making in South Staffordshire are altogether out of proportion to the selling rates for medium and common iron, which remain upon the basis of 3*l.* to 3*l.* 5s. for common cinder.

The South Staffordshire Coal Trade is quieter somewhat, although best "thick" and "deep" coals experience a fairly steady demand, and prices show no sign of weakness. Common coal and slack are, however, slow of sale, and there is some irregularity in the sell- ing rate.

The Parkfield estate, near Bilston (comprising important blast- furnaces and collieries), was, on Wednesday, offered for sale by auction. The surface outlay alone was estimated at 40,000*l.*, but the highest bid was 16,000*l.*, and no sale, therefore, was effected.

The following were included in to-day's quotations on the Bir- mingham Stock Exchange:—Cannock and Huntington Colliery, 1¼ prem.; Perry Colliery, ¼ dis.; Sandwell Park Colliery, 28; West Cannock, 45 prem.; Hamstead, 1¼ prem.; Ivy House and Northwood, 1 dis.; John Bagnall and Sons, 6¾; Chillington Iron, 5, sellers; and Pelsall Coal and Iron, 5 to 4 dis.

The Hamstead Colliery Company's new sinking has reached a depth of 50 yards, and the work is proceeding satisfactorily.

The North Staffordshire Iron Trade does not present much im- portance this week, although some of the bar-mills are in rather steadier operation. There is very little doing in plates, although prices are maintained with some degree of firmness by the cost of production.

The Spon Lane Colliery Company first annual meeting was held on Monday. Reports were read showing that considerable plant and machinery had been put up since the operations had commenced, and that the winding shafts were partially cleansed. It was thought that the maiden thick coal would be got at by November. A share- holder complained that nearly half the purchase money had been paid in the first year, before coal had been got at, although ten years were allowed for the payment. Another asked how it was that nearly 5000*l.* had been spent more than had been estimated in the prospectus. It was explained that the bulk of the purchase money had to be paid in the first year, and that the extra outlay was for the purchase of freehold land liable to material damage by the mining operations of the company. The report of the directors was adopted, and the directors were re-elected, but the question of remunerating them for their services was deferred, after two close divi- sions, till the next annual meeting.

TRADE OF THE TYNE AND WEAR.

Feb. 10.—There has been a little improvement in business in the Tyne, but the demand for coal and iron is far from satisfactory as yet. The Steam Coal Trade has been in a very sluggish state. The price of best steam coal is still nominally 14s. per ton; but little business is done at that rate. Few can realise more than 12s. per ton. The demand for gas coal continues good, at from 8s. to 10s. per ton; but the house coal trade is very flat, and prices are droop- ing. There is some improvement in the demand for manufacturing coal, but these coals are still very plentiful and low in price. It is apparent that the Durham coal trade is improved a little; but the check which the household coal has received, owing to the mild weather, has had an injurious effect.

The Iron Trade of the district has revealed some new features during the past week. There has been a decided depression in the pig-iron market, which had continued for some time, and pig metal has been sold at lower figures than has been the case for some time past. Makers have tried to stem the downward movement, but with only partial success; and though they have been firm at 51s. 6d. to 52s. 6d., merchants have been selling No. 3 at 50s., and No. 4 forge at 49s. 9d. to 50s., while for forge makers have been selling at from 50s. 6d. to 51s. The advance of No. 3 pig-iron beyond 50s. per ton places it out of competition with the brands of Staffordshire. Whilst No. 3 was at 50s. per ton there was a large inland sale, but when prices advanced to 53s. the demand for Staf- fordshire at once slackened, and Lincolnshire and other iron took its place; at the same time, probably for the same reason, the de- mand for shipment fell off; at present there is a danger of stocks accumulating. In the finished iron trade some branches, such as plate and angle iron, have shown a very decided improvement, and plate makers in many instances have work in hand sufficient to keep them employed several months to come. The rail trade, on the other hand, continues dull; very few orders have been received during the present year, and many of the large works are nearly stopped. The rates of pig-iron and the reduction in wages has caused lower rates to be quoted. Rails are 6*l.* 15s. to 6*l.* 17s. 6d.; ship-plates, 9*l.* 15s. to 9*l.* 17s. 6d.; common bars, 9*l.* to 9*l.* 2s. 6d.; puddled bars, 4*l.* 15s. With the exception of a few men at the Dar- lington Ironworks, all those who struck against the reduction have returned to work.

MINING INSTITUTE.—A meeting of the North of England In- stitute of Mining and Mechanical Engineers was held on Saturday in the Wood Memorial Hall, the president, Mr. Lindsay Wood, in the chair. From the minutes of the council meeting it appeared that preliminary arrangements had been made for a meeting of the Institute, to be held in London, which it was suggested should be held in May next. The secretary (Mr. T. W. Bunning) stated the result of his interview with the president and secretary of the Institute of Civil Engineers, who suggested that the meeting should be held in the latter end of May; and a slight programme had been drawn out, and would be submitted to the members at an early date. The secretary read a paper contributed by Mr. J. J. Williams, C.E., M.E., "On the Mineral Resources of Flintshire and Denbigh- shire." A vote of thanks was given to Mr. Williams for his paper. M. E. F. Boyd stated that he hoped to lay before the Institute some information which he had gathered during his late visit to the United States with respect to the oil mines of Pennsylvania; and he would also be able to give them some idea of the immense quantity of coal which there is deposited in North America.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Feb. 11.—A considerably less tonnage of coal was taken to London by rail last month than there was in December. To some extent this may be attributed to the difference in the weather, but un- doubtedly there are other causes at work influencing the change. High prices have led to increased economy with respect to fuel for household purposes, the consumption of which is diminishing more than otherwise. We consequently find that the production of our collieries was considerably less in 1874 than in 1873, and it is gene- rally believed that last year will also show a falling off. The de- cline of the traffic by the Midland to the extent of nearly 13,000 tons for the month falls on a few of the leading collieries in Derbyshire, including Glay Cross, Langley Mill, Pilsley, Pinxton, &c. Eight collieries that in December sent to London upwards of 95,000 tons of coal last month were only credited with 77,000 tons, whilst Unstone and two or three other places increased their tonnage. During the present year there is every appearance that coal will be unusually abundant and cheap, owing to the number of new collieries being opened out, for the productive power at the present time is greatly in excess of what is required.

The first sod of two shafts connected with the Stanhope Silkstone Collieries (Limited) were cut last week by Mr. W. S. Stanhope, M.P., and Mr. H. Lodge, colliery proprietor and chairman of the company. The site of the new collieries is on the east side of the road leading from Barnsley to Cawthorne, near to what is known as Cawthorne Basin. The company has been registered with a capital of 50,000*l.*, in 5000 shares of 10*l.* each. It is proposed to put down a couple of 15-ft. shafts to the Silkstone seam, which is expected to be met with at a depth of 152 yards from the surface. Tenders are already advertised for, and it is expected that 18 months will be required to reach the coal which is being worked at the Silkstone Main Colliery, whose workings extend near those about to be opened out by the new company. It is intended to put down suitable machinery for rais- ing 700 tons per day of the Silkstone seam. In addition to this seam the area leased by the company contains the Swilley or Canal coal, which is so noted for gas making purposes, as well as the Flockton and Parkgate seams. The directors propose to work the Flockton seam of coal at once by means of a drift, which will give them a yield in six months' time of something like 300 tons per day, making the ultimate output 1000 tons per day. The area which has been leased from Mr. W. S. Stanhope, M.P., is upwards of 150 acres in extent, and it is estimated contains 5,000,000 tons of coal, which is held under leases for 44 years. The site chosen gives the company ample means for dispatching their coal by either rail or water. A branch from the Lancashire and Yorkshire line running near, whilst the Aire and Calder Canal is within an easy distance. The ceremony connected with cutting the sod took place about noon. Amongst those present were Mr. W. S. Stanhope, M.P., Mr. H. Lodge, colliery proprietor and chairman of the company; Mr. T. Wilkinson, of Ardsley, one of the directors; Mr. W. H. Chambers, manager of the Silkstone Main Company, and managing director of the new collieries; Mr. R. Cooke, of Sheffield; Mr. Clayton, Doncaster; Mr. Glover, secretary of the company; Mr. E. Booth, Barnsley, engineer for the company; Mr. J. Qualters, ironfounder, Barnsley; Mr. J. O. Carr; Mr. Ormsworth, solicitor; Mr. J. Smith, Barnsley, &c. The site of each shaft was staked out, and are but a short distance from each other. Mr. Stanhope was presented with a beautiful solid silver spade with an ebony handle. On the spade was beautifull engraved the arms of the family with the Spencer motto—*Dieu defend le droit*. It also contained the follow- ing inscription:—"Presented to W. T. W. Spencer Stanhope, Esq., M.P., by the Stanhope Silkstone Collieries Companies (Limited), on the occasion of his turning the first sod of those collieries, Feb. 3, 1876." Rain fell fast before the proceedings begun, but whilst the ceremony was going on it was fine.

A few weeks ago newspaper readers were startled by the news that one of the most disastrous colliery explosions which has occurred in the South Yorkshire district had taken place the day before. The enquiry which followed proved beyond all reasonable doubt that the explosion was due to the neglect of precautions which experience has proved to be absolutely necessary, and for the enforcement of which the law has made provision. The evidence given before the Coroner showed that a lax system existed with reference to the employment of gunpowder and the use of naked lights, and no one who read the evidence could have any doubt that the same laxity pre- vailed in other pits in the neighbourhood. The case heard before Mr. Bruce at the Leeds Police court, on Tuesday, shows that it is not only in South Yorkshire that working colliers are allowed recklessly to place in jeopardy their own lives and the lives of their fellow-workers, in open violation of the law. It is probable that Mr. Muckle, the certificated manager of the Broomhills Colliery, is not more guilty than other managers in the Leeds district; but he has certainly been justly punished for the system which has grown up under his management at this pit. The special charge against him was that on Nov. 16 he had permitted open powder to be taken into the pit by a collier named Crabtree, within a few days of a fatal explosion in the workings. The evidence, however, went beyond this particular case, and showed that the workmen at this pit, in accordance with the general practice of the district, are allowed to purchase their own powder, and to make their own cart- ridges for blasting; that no precaution except a verbal warning (which is treated as a dead letter) is taken to prevent the men having loose powder in their workings; nor are the men searched to ascertain whether they take matches down with them. If naked lights were also permitted at Broomhill, as in some of the Leeds pits, we should have the concurrence of a series of acts which could, sooner or later, only lead to one result—an explosion similar to that which occurred on the 10th of the same month. Mr. Bruce was justified in speaking of the offence as a serious one, and in inflicting the full penalty upon the defendant.

THE ELLISTOWN NEW COLLIERY, LEICESTERSHIRE.—Col. J. J. Ellis celebrated the winning of the top main hard coal at the above colliery, on Thursday, by entertaining all the men employed at the works, and also at his Nailstone Colliery, at a sumptuous dinner, served up in the grounds near the pits. The Ellistown Colliery is situated about twelve miles from Leicester, on the Leicester and Burton branch of the Midland Railway, about 200 yards from that line, and a mile beyond the village of Bagworth. The estate comprises about 800 acres freehold, the surface being farmed by Col. Ellis. The first sod was turned by Mrs. Ellis on July 2, 1873, and since that time sinking operations have been carried on night and day, with few interruptions, and with great success. No less than 19 seams of coal have been bored through, 10 of which are very valu- able and workable. At a depth of 240 yards a cannel coal was met with 2 ft. 9 in. thick, and of good quality. The "find" caused some surprise, as this particular kind of coal is rarely found in the Leicestershire coal fields. At 256 yards the top main hard coal was reached, and has proved to be excellent. This seam it is proposed to work, and the obtaining of the coal gave rise to the holiday on Thursday. Some very fine beds of ironstone were found during the sinking operations, and these will ultimately become of great value to the district, by giving employment to a great number of people. A large number of men are still employed boring, and the sinking is progressing favourably towards the other useful mines underlying the top main hard coal, the colliery bidding fair to become one of the most valu- able in the neighbourhood. The works are very extensive, and no expense has been spared to put down the most improved appliances for obtaining coal which could possibly be procured; and whilst Col. Ellis has provided for his own benefit, he has at the same time studied the interests of his workpeople, by providing to the utmost of his power for their own personal safety, and by erecting near the works convenient and substantial houses for them to reside in. There are three shafts on the estate. To one is attached a pair of 34 in. horizontal winding engines, 5-ft. stroke, with drums 20 ft. weighing 25 tons. The two pulley wheels for the head-gear are 20 ft. in diameter, and weigh 3 tons each. There is also a single horizontal engine, 26 in. cylinder by 4 ft. 6 in. stroke, which drives the immense pump gearing, which lifts to the surface from a depth of 100 yards no less than 30,000 gallons of water an hour. In an adjoining building is a smaller engine kept for the pumping shaft in case any accident should occur to the gear, &c. The engines are fed by eight capacious boilers, the two massive chimneys attached to the furnaces being respectively 180 and 150 ft. high. The engine-houses are kept in excellent condition. The floors are covered with cocoa-nut matting, and the rooms present the appearance more of comfortable and well furnished apartments in a dwelling-house than places where engines of 500 horse power are kept work- ing. The enginemen attending the ponderous machines stand on a platform, which is covered with Brussels carpet, and everything looks as clean, neat, and compact as it possibly can. There are also two large store-rooms, which contain a double supply of everything required for the working of the colliery. Great praise is due to the mining engineer, Mr. Thos. Millership, for the ability he has displayed in carrying out the works, which are a credit to the profession. The offices of the manager and his assistant are splendidly fitted up, the walls of the chief compartment being adorned by elaborate drawings of the machinery, head- gear, and wheels employed, which have been prepared by Mr. J. T. Millership. This gentleman has also drawn an admirable section showing the different strata sunk through at the colliery, and, taken altogether, the works are as complete as any to be found in the Midland coal fields. At the opening ceremony there were present among others Col. Ellis, Mr. T. Millership (manager of the colliery), Mr. J. T. Millership, Mr. C. M. Barker, of the firm of Barker and Ellis, London solicitors to the Ellistown New Colliery and the Nailstone Colliery); Capt. Mottram, Mr. A. M. Marsden, of London; Mr. and Mrs. Hollingsworth, Birmingham, and Mr. Gibson, Leicester.

DYNAMITE EXPERIMENTS AT GRIMESTHORPE.—The advantages of dynamite as an explosive agent are just now being strikingly ex- emplified at John Brown and Company's blast-furnaces at Grimes- thorpe. It seems that for some time past one of the furnaces in which Bessemer iron is made has been "losing" a quantity of metal; in other words though it was known that the furnace must have contained a certain quantity of metal, at given periods, this quantity was not forthcoming when the furnace was stopped. The loss at last became so great that it was resolved to extin- guish the fires and endeavour to discover the cause of leakage. It was then found the molten metal had destroyed the bed of concrete at the bottom of the furnace,

that the concrete and bricks had boiled up and had disapeared as "slag," and that in place of the bed was an immense mass of Bessemer iron, several yards in depth, and probably weighing about 170 tons. How to remove the metal now became a problem most difficult of solution. A ball, upwards of 2 tons in weight, which is ordinarily used for this purpose, was discharged from the top of the furnace upon the metal beneath, but it had no effect whatever upon the tough Bessemer iron. The use of the strongest powder which could be obtained was then resorted to, and this was continued for about two months. The results at the end of that time were however, so very slight that powder was abandoned, and in this state of affairs Mr. J. M. Twibell, as the agent of Messrs. Bean and Co., of Leeds (who are the representatives in this part of the country of the Dynamite Company), entered into a contract to remove the metal. The effects of this new explosive were absolutely wonderful. As much effect was produced the first day shots were fired as during the whole of the previous two months, when only powder was used; and since then the dynamite having cracked the metal even when it failed to dislodge a portion of it, the results have been much more favourable. It is believed that about 70 tons have been removed, and this represents work accomplished in five or six visits paid to the furnace by Mr. Twibell and Mr. Henry Patchitt, the latter of whom comes from Messrs. Bean and Co., in order to fire the shots. The great difficulty experienced is, of course, in boring the holes. This is is a very tedious process, owing to the iron being so tough, and it occupies so much time that shots can only be fired twice a week. Four or five shots were fired on Saturday, with results that were, to say the least, very extraordinary. Blocks of iron, 8 or 10 tons in weight, were rent asunder with the utmost ease, and in one or two instances the metal was split into three pieces. Used with due care, dynamite is much safer and it is very much more powerful than gunpowder.

SALE OF SHARES IN THE TIPTON GREEN COLLIERY COMPANY.—Messers. Hepper and Sons, auctioneers, Leeds, on Tuesday offered for sale in their rooms, 100 fully paid-up shares of 10*l.* each, in the Tipton Green Colliery Company (Limited. There was a large and respectable attendance. Bidding was commenced at 10s. per share; 1*l.* was next offered; then 25s., 30s., and 35s. After a pause the bidding advanced by a shilling at a time to 2*l.*, at which price the shares were knocked down to Mr. G. W. Parker, insurance agent.

REPORT FROM LANCASHIRE AND CHESHIRE.

Feb. 10.—The Coal Trade is still very dull, stocks are rapidly accumulating, and prices are sinking. Many of the collieries are working short time, and there are rumours of a reduction of wages at an early date. In the Iron Trade a general reduction of quotations has taken place. In recent lists No. 4 foundry is quoted at 50s.; bars at 8*l.* 5s. to 10*l.* 5s., and hoop iron at 9*l.* 5s. to 9*l.* 15s.

The difficulty of finding magistrates to deal with colliery cases under the provisions of the Act of 1872 has recently been several times experienced in Wigan. At the last sitting of the county justices in that place, Mr Maskell Peace appeared in support of a summons charging a collier with neglecting to prop his working place. There were half a dozen magistrates on the bench; but there was only one unconnected with collieries, and the statute requires two to hear such cases. Mr. Peace took the extraordinary course of asking the justices to dismiss the case, on condition that the defendants' solicitor (Mr. Richardson) admitted that there had been a breach of the law. This was done, and the case was not further heard.

The directors of the Stand Lane Colliery Company have just issued their report. They say that during the past year trade generally in the district has been quiet, and the coal trade has suffered a corresponding depression. Strong competition has had to be met from the Wigan district, more especially in steam coal, which constitutes the bulk of the sale at Stand Lane Colliery, and the entire sale of Whitefield Colliery. The gradual decline of selling prices which took place through the year 1874 was followed, in the middle of 1875, by a further reduction, and to counterbalance these deductions from profits only one reduction of wages has taken place from the highest point in 1874. In view of those circumstances the directors have every reason to congratulate the shareholders upon the result of the year's operations, which show a profit of 5767*l.* 15s. 1d., which is nearly equal to 10 per cent. upon the paid-up capital. Although having a balance of profit in reserve the company would be able to pay a dividend at the rate of 10 per cent. per annum for the half year; yet in view of contingencies, and of the fact that it will be some time before the money now being invested on capital account will begin to yield a return, the directors think it advisable to recommend to the shareholders a dividend at the rate of 5 per cent. per annum for the half-year, making 7½ per cent. for the year. This will leave a sum of 3770*l.* to be carried forward in reserve.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Feb. 10.—The Iron Trade has not improved since last report, although the disputes at several of the establishments have now been adjusted, the men going in at a reduction. Messrs. Brogden have offered the puddlers employed at their works at Maesteg and Tondu a reduction of 7½ per cent., and the men in the other departments 12½ per cent., and the mill and forgemen have resolved not to resume work until a more satisfactory arrangement can be arrived at. There is still a fair demand for pig-iron, and advices to hand show that business is satisfactory at the steelworks, a fair number of miscellaneous orders being on the books. It is surprising that the orders for steel rails do not increase, as they are so cheap at present.

The award of the sliding scale committee of the South Wales Conciliation Board has at last come before the public. In consequence of the statement of the accountants as to the net prices of coal sold during the months of November and December the committee agreed that the minimum standard of wage should prevail—5 per cent. above the prices in 1869, and that at a future meeting they would settle the particulars of the prices for each group of collieries. The Steam Coal Trade has been somewhat larger during the week, but prices do not improve, and the condition of affairs can, therefore, hardly be considered satisfactory. House coals are unaltered, and in the patent fuel trade very little is doing.

A meeting of miners was held at Hirwain last week, at which a resolution was passed that all present join the National Union of Miners.

On Saturday the Master of the Rolls granted a supervision order for the winding-up of the Duffryn Rhondda Coal and Coke Company (Limited), which was incorporated in 1874, with a capital of 500,000*l.* Resolutions for a voluntary liquidation have recently been passed by the shareholders. The petitioner in the case was Mr. Jas. Partick, of Garth House, Bassally, near Newport.

Judgment was delivered on Saturday by Vice-Chancellor Hall, in the case of Morgan *v.* Rodewald. The question arose out of transactions relative to the purchase of iron mines and iron collieries, near Aberdare. The dispute was as to whether the defendants should pay for certain manufactured stocks left on the premises when they took to the works. The Vice-Chancellor held that the extra stock was not included in the contract of purchase, and granted the prayer of the bill, with costs.

William Roberts, who has traded under several aliases as a merchant and shipper, has, after several remands, been now committed by the Lambeth magistrates on a charge of obtaining coal from the Welsh Steam Coal Company and other firms, under false pretences, to the Old Bailey Sessions.

The council of the South Wales branch of the National Union of Miners have held a meeting a Pontypridd, and during which it was announced that the central branch had agreed to allow strike pay to the men who had left work at Cwmmawr Collieries, Llanelley, rather than submit to a reduction of wages. The owners of the collieries do not belong to the Masters' Association.

A difficulty has already arisen out of the award of the sliding scale committee. Mr. W. T. Lewis and Mr. H. Mitchard sat at Newport, on Wednesday, to decide as to a practical difficulty which has occurred in consequence of the increase which took place some time ago to bring the wages up to the common standard. The contention is that the wages must be brought down to the old prices. Representatives of the men, and also of the Tredegar, Rhymney, Dowlais, and other collieries were present, and the award of the arbitrators is expected shortly.

The returns of the coal and iron exports for the past month, which have been issued, show a lamentable falling off in the exports of iron—the staple trade of this district; and, in fact, during the portion of the present month already expired the exports from the local ports have not much exceeded 2000 tons, which have been shipped to Sweden.

COAL-WINNING AT MAERDY COLLIERY.—On Saturday, a seam of coal was won 123 yards below the surface of the earth. The vein measures 3 ft. 6 in. The sinkers had been labouring there for nine months, and it was rumoured that they had sunk on a "fault," but it turns out that coal is plentiful, and this pit will, no doubt, give employment to hundreds of men in a short time. Great credit is due to Mr James, the manager. The pit is the property of Mr. Mordecai Jones, of Nantmelyn, and is one of the largest leasehold undertakings in Wales. It is situate near Ferndale, and about four miles from Aberdare. Another pit will soon be sunk at this place.

BRUSSELS INTERNATIONAL EXHIBITION.—The announcement has been made that intending exhibitors at Brussels should at once apply for space; and as it is probable that the exhibition to be opened in June will be visited by a large number of Engineers connected with collieries and ironworks, as well as with general engineering works, it is perhaps worth while to direct the attention of inventors and manufacturers to the fact that the second class is open to the reception of all such apparatus as safety-cages, machinery for breaking down coal without the use of powder, and various other contrivances of that description in which readers of the *Mining Journal* are interested. An important element in the exhibition will be the trials of machinery and apparatus, which will take place at Brussels, Antwerp, or Ostend, as may be most suitable in each case; and much benefit may be expected to accrue to exhibitors from the arrangements which have been made for the discussion of the merits of the several exhibits at a congress to be held in connection with the enterprise.

GOGINAN AND LEVEL NEWYDD MINES COMPANY (LIMITED).

By an advertisement in our columns of to-day it will be seen that these mines, which formerly made large profits to the shareholders, now require a small amount of further capital to bring them again into a profitable state. It is well known that the original capital of these mines was but 500*l.*, and that in the course of a few years dividends were paid to the amount of 44,000*l.*, since which time considerable expenditure has been made upon works of exploration and machinery, but not without considerable success, as discoveries of extensive and valuable lengths of ore ground have been again made. All that is now required are the means for making these discoveries available, and continuing further operations. With this view very favourable terms have been proposed to distribute by allotment, by way of preference shares, a portion of the unissued share capital of the company, in order that the eastern portion of the discovered ore ground may be speedily laid open and made available. This portion is about 100 fms. long, and when the two shafts now being sunk are carried down about 14 fms. deeper it is estimated by experienced and disinterested agents that ore ground to the value of 25,000*l.* to 30,000*l.* will be laid open, and taken away at a large profit. The ore, being rich in silver, realises on an average about 19*l.* a ton.

The mine can be carried down to a much greater depth with the existing machinery.

Most of these preference shares have been taken up by shareholders who know the property well, but, there being many executors, trustees, and others who are unable to take their proportions, they will now be allotted to other applicants.

CURRENT RAILWAY TOPICS.

The frightful accident on the Great Northern Railway at Abbots' Ripton can scarcely fail—unless it should be eclipsed by some new horror—to attract the serious attention of railway stockholders, and even of the High Court of Parliament. The question, after all, suggested by this accident is not whether some poor signalman exactly discharged his duty or not, but whether the time has not arrived when, in the interest of railway stockholders themselves, and certainly in the interest of the travelling public, Parliament must insist upon third lines of rails being laid down upon all trunk systems earning a revenue of 100*l.* per mile per week and upwards. Such a policy as this is especially necessary in the case of the Great Northern, as that company's system has very greatly increased in importance since it was first opened for traffic in 1850. Incessant activity is the order of the day—and for the matter of that of the night also—upon the Great Northern. The system is gorged with traffic, and yet between London and Peterborough the appliances existing for dealing with that traffic differ but slightly from those provided when the line was first opened in 1850. An immense coal traffic to the metropolis has been developed with painstaking and praiseworthy industry, and the stream of general passenger and goods traffic has enormously swollen during the last 25 years. The loop line which leaves the company's main stem at New England, near Peterborough, and falls into it again at Gainsborough, is of very great service in relieving the main stem of coal and goods trains which would otherwise inconveniently crowd it; but as between London and Peterborough the coal trains—which are the real source of trouble to Great Northern officials—have to get on as well as they can. Not only has the traffic of the Great Northern been steadily marching on during the last quarter of a century, but the directors have prided themselves on improving their engines and carriages with the view of more effectually grappling with it. Engines of greatly increased weight now rush along the Great Northern with more and more crowded carriages behind them. The consequence is that when anything goes wrong it goes wrong with a vengeance.

Your railway accident in 1876 is not the comparatively humdrum affair it was in 1856. Then two or three unfortunates were killed or badly hurt, and the whole matter was a comparative skirmish. But now a railway catastrophe is beginning to attain the importance of a battle royal. The lists of killed and wounded grow larger and larger, and hence the necessity for remedial legislation becomes more and more imperative. There is yet another point to which we must call attention in dealing with the Great Northern disaster and the causes which may be said to have brought it about. The Great Northern has to carry on a competitive struggle for business with the London and North-Western and the Midland. Its trains must go at headlong speed, and they must follow each other in quick succession, or the company would not be able to maintain the excellent dividends which it has for some time given to its ordinary stockholders.

The question is "Are the public content that the conditions which tend to render travelling insecure upon the great arterial railways of the empire shall remain compararatively unnoticed and unheeded?" The immediate consequences of one of our great railway slaughters is a concourse of newspaper reporters from all parts of the country, each eager to outvie the other in "graphic" sensationalism; a long and tedious enquiry upon the part of some little coroner quite unequal to the occasion, even although he has the benefit of the professional services of the well-nigh ubiquitous Capt. TYLER; a Johnsonian verdict censuring some poor weary pointsman or overworked station-master; and a brilliant leader in the *Times*. Is all this sufficient to face and grapple with an ever-growing evil? We think not. We contend that increasing traffic calls for third lines of rails upon all our largest systems, at any rate for the first 100 miles or so out of the metropolis.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Feb. 2	Great Laxey	100	£24 15 0	Walker, Parker, & Co.
10	Talargoch	25	15 18 6	ditto
—	ditto	25	15 18 6	Adam Eyton.
—	ditto	40	16 2 6	Walker, Parker, & Co.
—	North Hendre	30	15 12 6	ditto
—	ditto (round ore)	5	18 0 0	ditto
—	ditto ditto	5	18 0 0	Adam Eyton.
—	Prince Patrick	50	15 8 6	ditto
—	West Bryn Celyn	6	14 5 6	ditto
—	Duchess of Westmin.	5	15 7 6	Walker, Parker, & Co.
—	ditto (round ore)	1	17 10 0	ditto
—	Van	50	15 9 6	A. Eyton.
—	ditto	100	15 14 0	Nevill, Druce, and Co.
—	ditto	100	15 10 0	ditto
—	ditto	50	15 11 0	ditto
—	ditto	50	16 5 0	ditto
—	ditto	100	15 10 0	Panther Lead Co.
—	ditto	50	16 5 0	ditto
—	West Tankerville	20	15 7 6	G. Burr.
—	Roman Gravels	50	15 8 6	A. Eyton.
—	ditto	50	15 10 0	Panther Lead Co.
—	ditto	50	15 8 6	G. Burr.
—	ditto	50	15 7 6	ditto

BLENDE.

Date.	Mine.	Tons.	Price per ton.	Purchaser.
Feb. 10	Van	50	£3 19 0	Vivian and Sons.
—	ditto	50	3 19 0	Richardson and Co.
—	ditto	100	3 15 0	Kenrick and Son.
—	West Tankerville	20	5 5 0	Villiers Spelter Co.

BLACK TIN.

Date.	Mines.	Tons c. q. lb.	Price per ton.	Amount.	Purchaser.
Feb. 5	West Godolphin	13 6 3 18	£46 0 0	£613 18 0	Bolitho.

COPPER ORES.

Sampled Jan. 26, and sold at Swansea, Feb. 8.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Cape Ore	67	26¾	£22 4 6	Union Ore	82	7¾	£8
ditto	66	26¾	21 18 6	ditto	17	21¾	15
ditto	65	26¾	21 13 6	Knockmahon	128	8¾	6
ditto	62	26½	21 11 0	Algerian Ore	84	19½	13
ditto	61	26½	21 11 6	Ballycummisk	41	7¾	5
ditto	60	26½	21 10 6	ditto	27	6¾	4
ditto	65	27	21 14 0	ditto	8	13¾	9
ditto	65	27	21 18 0	Bampfylde	19	7¾	5
ditto	50	36½	30 1 6	White Metal	10	17½	10
Union Ore	82	10¾	7 17 6	Copper Reg.	3	20¾	14

TOTAL PRODUCE.

Cape Ore	561	£12,626	8 6	Ballycummisk	77	£ 845
Union Ore	140	1,137	19 6	Bampfylde	19	114
Knockmahon	128	857	12 0	White Metal	10	99
Algerian Ore	84	1,383	2 0	Copper Regulus	3	14

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Copper Miners' Company	187	£ 1,299 0 6
Nevill, Druce, and Co.	201	4,399 3 0
Vivian and Sons	159	987 16 0
Williams, Foster, and Co.	183	3,843 13 0
Mason and Elkington	80	1,803 15 0
Charles Lambert	101	1,550 17 0
Sweetland and Co.	65	1,419 10 0
Landore Smelting Company	75	1,522 10 0
Total	1021	£16,617 5 6

Copper ores for sale Feb. 22—Cape Ore 73,-72, 50, 49, 48, 79, 60, 39, 55, 12, 61, 66, 62—Berehaven 125, 95—Knockmahon 135—Copper Ore 9—Copper Slag 1—1167 tons.

OGINAN AND LEVEL NEWYDD MINES COMPANY

(LIMITED).

Registered under the Companies Acts, 1862 and 1867.

Capital £30,000, in 12,000 Shares of £2 10s. each.

ALREADY ISSUED 7603 Shares as ORDINARY SHARES.

TO BE ISSUED as PREFERENCE SHARES not exceeding 3600 Shares of £2 10s. each.

Payments—10s. a share on application, and 10s. on allotment, the remainder by instalments of 10s. a share at intervals of not less than three months.

The amount paid on these Preference Shares to be returned, with interest at the rate of 10 per cent. per annum, out of the first profits of the company, after which the shares to still remain and rank in all respects as the Ordinary Shares.

Further information, reports, &c., may be obtained of MESSRS. JOHN TAYLOR AND SONS, No. 6, Queen-street-place, London, to whom APPLICATIONS for the REMAINING SHARES may be MADE ON or BEFORE the 21ST INSTANT.

DEBENTURES OF 7½ PER CENT.

THE DIRECTORS OF CHAPEL HOUSE COLLIERY COMPANY (LIMITED) are PREPARED to RECEIVE APPLICATIONS for 4000 DEBENTURES of £10 each, BEARING INTEREST at the rate of SEVEN AND A-HALF PER CENT.

Of these, 1550, representing £15,500, have been taken and subscribed for by the shareholders.

ISSUED CAPITAL, £10,000,

In Shares of £5 each, fully paid.

This company was registered on 11th December, 1873.

The profits made at the Colliery to 31st December, 1875, amount to £40,455.

The present output of coal on which the above profit has been made is about 300 tons per day.

These debentures are issued in the place of £40,000 of unissued share capital, and to increase the plant with a view to raising 1000 tons per day, when the profits should be proportionately larger.

Further particulars, with forms of application, may be had on application to the Secretary,

MR. W. H. HARRISON,

1, Palmerston Buildings, London, E.C.

THE EAST ELWY RIVER LEAD MINING COMPANY

(LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.

Capital £20,000, in 4000 Shares of £5 each,

For which share warrants to bearer will be issued, thus avoiding the trouble and expense of transfer deeds, and doing away with that annoyance so frequently the result of registration as a shareholder.

Payment, £2 10s. on application, and £2 10s. on allotment.

If no allotment is made the deposit money will be returned without deduction.

MESSRS. THORNYCROFT AND CO., 30, Brockley Buildings, South John-street, Liverpool, are AUTHORISED to INVITE SUBSCRIPTIONS for ONE THOUSAND SHARES of the EAST ELWY RIVER LEAD MINING COMPANY (LIMITED). Unlike many of the Welsh lead mines brought before the public, where "promising appearances" and "reliable indications" alone form the inducements held out to investors, this property has been developed to such an extent as to prove the existence of rich lead ore both in the shallow and deep workings, and in such quantities as to justify the strong expectation of early dividends held out by the prospectus.

In the case of this mine it is not a question of speculation as to what will be found when certain work is done, but an absolute fact that the completion of the deep adit level will provide facilities for getting away the ore already discovered, and also promote the further profitable development of this property, which Messrs. Thornycroft and Company confidently believe will eventually prove to be one of the most successful mines in Wales; and, judging by the high premiums to which dividend-paying mine shares rise in the market, they think it not at all improbable that the East Elwy River Lead Mine Company's shares of £5 each may ere long be quoted from £10 to £20 per share; and it is their belief that, under any circumstances, the shareholders may look for a very large percentage of profit.

ABRIDGED PROSPECTUS.

The property of the East Elwy River Lead Mining Company (Limited) is situate a short distance from the village of Talhaiarn, and about five miles from the Abergele station of the Chester and Holyhead Railway.

The property has been carefully examined by several well-qualified authorities, who express in most decided terms the high opinion they unanimously form of the great value of this mineral grant.

Capt. Thomas Mitchell, manager of the famous Parys Mountain Mine, and who has had great experience of mining properties, says—"I expect a great mine will be opened out, equal perhaps to any in the district, not even excepting the famous Talargoch Mines, which are situated only a few miles eastward."

[N.B.—The Talargoch mines have, it is said, returned over a million and a half sterling in profits, and are now being extensively developed.]

And considering the number of the lodes, their masterly size, highly promising appearance, and the rich quality of the ore obtained therefrom, the congenial nature of the rock in which they are embedded, the extraordinary working facilities the property possesses, the never-failing supply of water power available, and the other numerous conveniences appertaining to this property, I question if a more eligible property, and one likely to turn out more successfully with a small outlay of capital could be found in North Wales."

The following assay of the produce of the mine has been made by Messrs. Johnson, Matthey, and Co., assayers and melters to the Bank of England and Her Majesty's Mint.

Assay Office, Hatton Garden, London, E.C.
September 10, 1874.

Some of ore from East Elwy River Lead Mine:—Produce of lead, 80·50 per cent.
(Signed) JOHNSON, MATTHEY, and Co.

It will be interesting here to note that 14 lead mines, with a total subscribed capital of a little more than £800,000, have returned in dividends £2,250,000 sterling, or equal to a return of 360 per cent. upon the outlay. Of these, by far the most profitable are Welsh mines. The Lisburne Mines, for instance, have returned nearly £200,000 on an outlay of £7500; Minera, nearly £580,000 on an outlay of £45,000; and East Darren, recently, £70,000 on an outlay of £9600. Another Welsh mine, Goginan, has returned £290,000 on an outlay of £90,000; and, lastly, the well-known Van Mine has since its opening, six years ago, given nearly £200,000 in profits. With these facts before us, and considering the forward state of development of the East Elwy River Lead Mine, with ore discovered at several points, it is not being over sanguine to predict that at an early date the shareholders may look for dividends on a scale that will render this mine conspicuous in the records of the many already celebrated Welsh lead mines.

Prospectuses, applications for shares, and any further information may be obtained from the brokers, Messrs. THORNYCROFT and Co., 30, Brockley Buildings, South John street, Liverpool.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the MID-CORNWALL MINES (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, BY PUBLIC AUCTION, on Wednesday, the 16th day of February instant, at Eleven o'clock in the forenoon precisely, at the Hallew Iron Mines, in the parish of Roche, within the said Stannaries, subject to such conditions and in such lot or lots as shall be then and there stated, ALL that the INTEREST of the MINING COMPANY known as the said MID-CORNWALL MINES (LIMITED), in the following FREEHOLD HEREDITAMENTS and PREMISES, viz.:—

LOT 1.—All that Messuage or Tenement and Farm, commonly known as HALLEW FARM, situate in the said parish of Roche, containing 10 acres of arable land or thereabout, now in the occupation of Captain David Cock as tenant at will.

LOT 2.—All that piece of unenclosed Waste or Moorland, parcel of HALLEW COMMON, situate in the said parish of Roche, containing 12 acres or thereabout.

LOT 3.—All that the Reversion expectant on the death of a person now aged 71 years of and in all that Messuage or Dwelling-house and Garden, commonly known as GEACH'S HOUSE and GARDEN, situate at Hallew aforesaid.

And also the interest of the said compnay in the several Indentures of Set under which the mining operations of the said company have been carried on, at the Higher and Lower Burney House Iron Mine, the Hallew Iron Mine, in the parish of Roche, respectively; the Lanjew Iron Mine, in the parish of Withiel, and the Mollinnis Moor Mine, in the parish of St. Austell, together with the whole of the following

PLANT, MACHINERY, MATERIALS, AND EFFECTS,

Including all the Iron Ores at surface as shall be specified by the auctioneer at the time of sale belonging to the said company, and comprising as follows:—

AT THE CORNUBIA TIN MINE.

50-inch cylinder Beam Engine, 9-ft. stroke in cylinder by 8 ft. in shaft, two boilers about 22 tons, including new perpendicular pipe to the engine, plunger lift, windbores, pumps, pole, stuffing box and glands, door pieces, water-wheel, &c.

AT THE HIGHER AND LOWER BURNEY HOUSE IRON MINE.

7-inch cylinder portable Threshing Machine, with wheels; crown wheel, balance bobs rods, house lift, H-piece, pumps, flat rods, main rods, lifts, engine ladders, horse whim, chain, shaft tackle, double crab winch, and a large quantity of iron ore.

AT THE HALLEW IRON MINE.

48-inch double-acting cylinder Steam Engine, 8 ft. stroke, with fly wheel, shafts, travelling bob, horizontal rod, bobs, two axles, lifters, frames, stands and boiler, pumps, stamp heads, drawing lift, and a large quantity of iron ore.

AT THE GREAT BEAM TIN MINE.

3 ft. 8 in. tube, 36 ft. long, 6 ft. case, tube case, new axle for 12 heads, ditto for 8 heads, 24 heads ditto, pumps, &c.

AT THE LANJEW MINE.

About 40 tons of iron ore.

To inspect the above, apply to Capt. DAVID COCK, at Roche, aforesaid, and for further particulars to Mr. JOHN HENRY HAMLEY, the Official Liquidator of the said mine, at the Stannaries Court Office, in Truro.

THOMAS CHORLTON, 32, Brazennose-street, Manchester.
(Solicitor for the said Official Liquidator).
R. M. PAUL, Truro.
(Agent of the said Solicitor).

Dated Stannaries Court Office, Truro, this 3rd day of February, 1876.

SHARES IN A CELEBRATED MINING PROPERTY IN CHILI,

YIELDING LARGE PROFITS, FOR SALE.

TO BE SOLD, BY AUCTION, at the Mart, Tokenhouse-yard, in the City of London, on Tuesday, the 23rd day of May, 1876, at Two o'clock precisely, by MESSRS. DRIVER, in One or more Lots,

THREE SHARES (in Chili designated Barras) in the CARRIZALILLO MINING COMPANY. The company is divided into 24 shares only.

The CARRIZALILLO COMPANY own the celebrated DESCUBRIDORA MINE, and the three adjoining setts of SAN JUAN, CANCHAS, and SAN FRANCISCO, which are all worked under one administration, and are situate about thirty-three miles from the Port of Pan de Azucar, from whence there is a good road.

The DESCUBRIDORA MINE has been working since 1859, and has yielded large profits. There are two steam-engines at work, one of 20-horse power and one of 8-horse power, for drawing, and there is also a newly-erected powerful engine, with Blake's crusher attached; by the use of the latter the company is enabled to dress and return the large accumulation of low-produce ore, which will now give a considerable profit. The mine is in thorough working order, and well stocked with materials, rails, jiggers, crushers, &c.

The adjoining setts of SAN JUAN, CANCHAS, and SAN FRANCISCO were acquired for the purpose of securing the ground around the Descubridora Mine, and they have since been worked on a limited scale. There is also a shop, which supplies the workpeople, and also horses, carts, and mules.

Also the VEGA WASHING AND JIGGING ESTABLISHMENT, with yards, houses, shop, and stores, about nine miles from Descubridora (a tramroad is being laid down from the mine, which will greatly lessen the costs of carriage to the Vega). There are also dwelling-houses, bake-house, yards, store-rooms, ore-floors, and mole at Pan-de-Azucar, with convenient launches for use in loading ships with the ore; and there is also belonging to the company a quinchique establishment, a watering place, situate about eleven miles from Pan-de-Azucar, on the road to Descubridora, with dwelling-house, shop, store, mule yard, water carts, mules, and harness; and in Chanaral Port a dwelling-house of eight rooms, and spacious balcony and store below, with good counting house.

The company also have at Chanaral other houses and sites, and also a complete condensing apparatus, with four boilers, &c.

Two-thirds of Descubridora, San Juan, Canchas, and San Francisco, with some other property of comparatively small value, were sold in 1872 for the aggregate sum of £90,000, and since then profits have been divided much more than sufficient to repay the purchase-money, and there is every prospect of Descubridora continuing to give large profits for a considerable time.

Printed conditions of sale will be shortly ready, and further particulars can be obtained in Chili from ROBERT PEEBLES, Esq., Chanaral, Chili; and in England from Messrs. DRIVER, the Auctioneers, Whitehall, London; or of

S. T. G. DOWNING, Solicitor, Redruth, Cornwall.

THE HENDON SPELTER WORKS.

TO CAPITALISTS, PROMOTERS OF PUBLIC COMPANIES, & OTHERS.

FOR SALE, in consequence of the Death of the late Senior Partner, John Candlish, M.P., the SPELTER WORKS, situate at Hendon, in the borough of Sunderland, in the county of Durham, carried on under the style of "THE HENDON SPELTER COMPANY."

The works are situated within one mile of the well-known docks of the port of Sunderland, and adjoining the Hartlepool Branch of the North Eastern Railway, with which they are connected by high and low level sidings, and thereby placed in communication with all parts of the United Kingdom. Their position, within easy distance of both the ports of Newcastle and Sunderland, is very advantageous for the cheap importation of raw material, as also the forwarding of the manufactured article either by land or sea.

The ground on which the works are built can be either bought out or bought on a yearly perpetual ground rent, and any quantity under 20 acres can be included in the sale.

Being situated in the midst of the Durham Coal Field fuel of the best description can be obtained at a cost below almost any other part of the United Kingdom.

There are 19 workmen's cottages, which can be bought with the works.

The works contain 24 zinc furnaces, capable of producing 70 tons of metal a week, as also calciners, potlofts, machinery, blacksmiths' and joiners' shops, &c., of sufficient capacity for a much larger number. The works can, therefore, be doubled at a comparatively small cost.

The quality of the metal made at these works is well known, and it, therefore commands a ready sale at the highest prices.

Attached to the high level sidings are large depôts for coal, ore, &c.

The goodwill would, of course, go with the works, and they will be sold subject to all stock being taken at a fair market value.

The purchaser can also have the option of buying the CALCINING WORKS and VALUABLE MINES in SPAIN, thus allowing of the economical and regular supply of the raw material, and saving the mineowners' and merchants' profits.

As the ore from the South of Spain generally comes as ballast for ships laden with esparto, it has been brought for this company at an average cost of 7s. per ton, sometimes as low as 4s. 6d.

Further particulars can be had on application to the company.

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TO BE SOLD, a COLLIERY ROYALTY in NORTH WALES, close to rail or shipping port; several shafts partially sunk; coal fully proved of FOUR SEAMS of good HOUSE and STEAM COALS, in an area of upwards of 400 acres of surface. It adjoins the West Mostyn Coal Field, just successfully launched, where under seams (including Cannel) have been proved in addition to the above; so that eminent engineers state that the available coal in this royalty may be 88 feet thick.

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THE ANNUAL GENERAL MEETING of the IRON AND STEEL INSTITUTE will be HELD at the Rooms of the INSTITUTION OF CIVIL ENGINEERS, 25, GREAT GEORGE STREET, WESTMINSTER, S.W., on the 28th, 29th, and 30th of MARCH, 1876.

Gentleman wishing to communicate Papers for this Meeting are requested to inform the General Secretary.

JNO. JONES, General Secretary, 7, Westminster Chambers, Victoria-street, S.W., and Royal Exchange, Middlesborough.
DAVID FORBES, F.R.S., Foreign Secretary, 11, York-place, Portman-square, London, W.

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ONE 13 ft. IRON BOB.
EIGHT LARGE GEAR WHEELS.
ONE ORE CRUSHER, complete.
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The New Carleen Vor and West Metal Mining Company (Limited) has been formed for the purchasing and working of valuable mines adjoining the Great Wheal Vor Mines, situate in the parish of Breage, Helston, and near to the shipping port of Porthleven, Cornwall.

The lease of 21 years from the 31st December, 1874, is held at the low royalty of 1-24th without dead rent.

The property extends about three quarters of a mile from east to west, and about half a mile from north to south, in the centre of a rich mineral district, and comprises six well-known lodes, continued from the adjoining Great Wheal Vor property, as shown by the plan.

One of the Carleen lodes (Trueman's) was worked for about 16 years; during that time the returns exceeded £100,000 in tin, and £20,000 in copper, although tin was then selling much under present prices. A shaft has been sunk on this lode to 110 fms. below the adit, and levels driven east and west on the lode. An adit, 100 fathoms long and 22 deep, has been driven for drainage. There is also a well-constructed engine-house. These works have cost over £10,000.

Three geological features occur in this property, which may be specially noted:—

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2nd.—Experience has proved that wherever an elvan course occurs it is accompanied by large mineral deposits. An elvan course passes through the Great Wheal Vor and this company's properties.

3rd.—The Cornish miners say, "mundic never rides a bad horse;" and experience shows that underneath mundic there is always a large metallic deposit. An extensive bed of mundic (containing, by analysis of Prof. White, 4½ per cent. of arsenic) exists on this property, which, as it meets with a ready sale, will yield considerable profit

Two of the lodes opened may be worked at once. The expenditure of about £3000 on machinery will enable the company to have this portion of the mines in full work. The proved productiveness of the property leaves little doubt that a large revenue will be secured within a comparatively short space of time.

The property has been favourably reported upon by well-known mining engineers.

The vendor has agreed to accept 1000 fully paid-up shares, and £2000 in cash, in payment for these properties, and will pay all preliminary expenses up to the date of allotment of shares.

The only contract entered into is dated the 5th January, 1876, and made between Jesse Hall, of the one part, and Thomas Hunter, trustee on behalf of the company, of the other part.

A copy of the contract for purchase of the lease, Memorandum of Association, and the original reports, may be seen at the offices of the solicitor, and prospectuses and other information obtained on application to the secretary, at the temporary offices of the company, 182, Gresham House, Old Broad-street, London, E.C.

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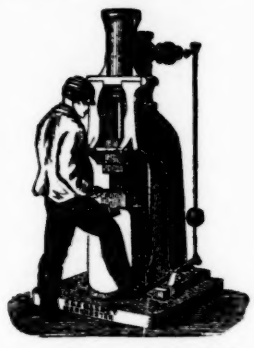
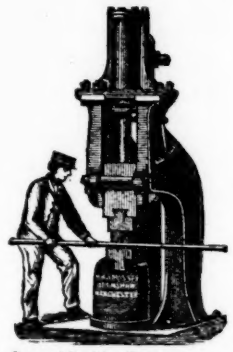
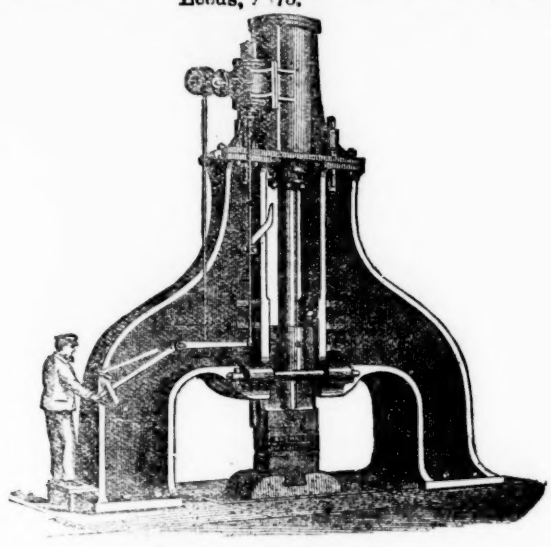


Hammer with Foot Motion.



General Smithy Hammer.



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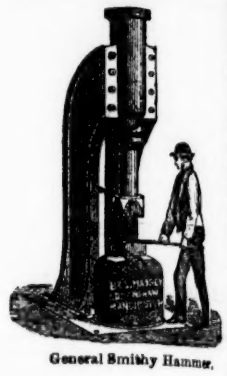

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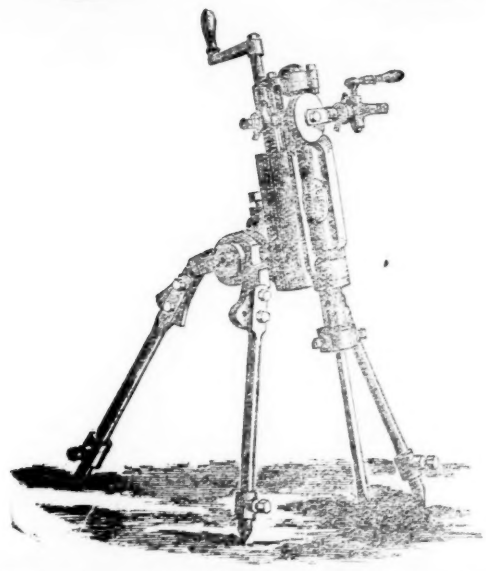

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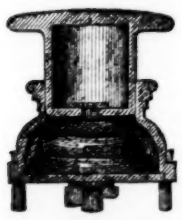

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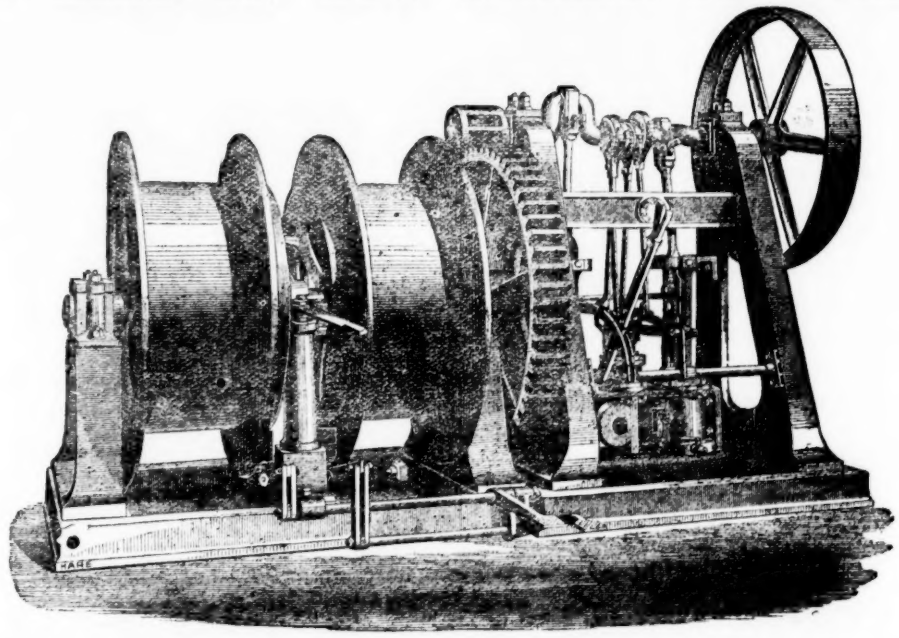

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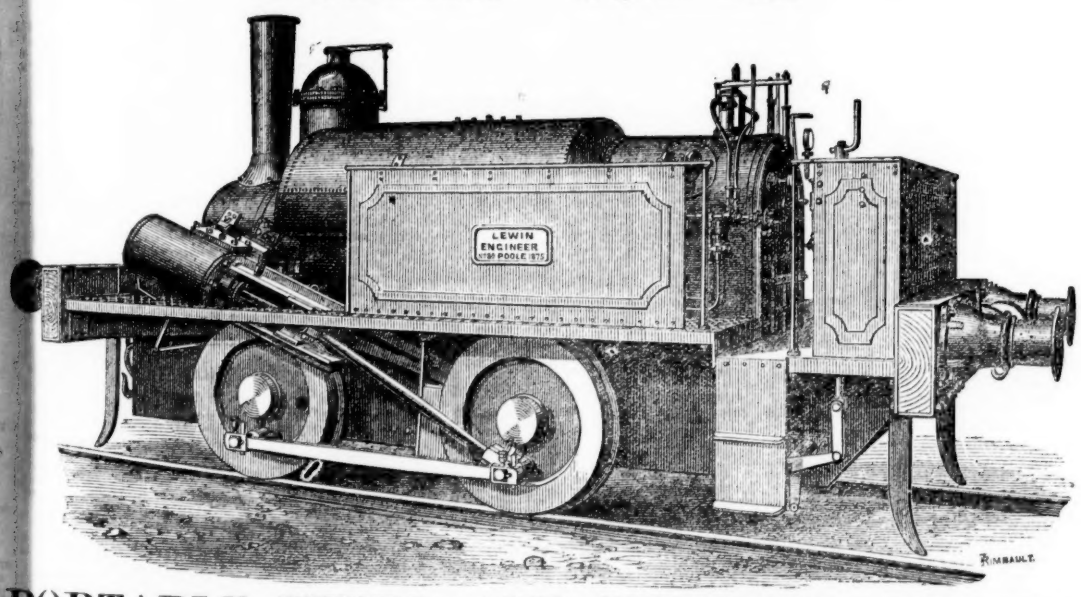

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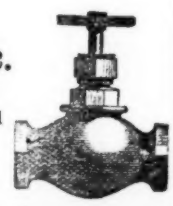

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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
1500	Alderley Edge, c, Cheshire*	10 0 0	—		12 11 8	0 5 0	Jan. 1876
11000	Balmynheer, t, Wendron (4000 to is.)	1 0 0	—		0 2 0	0 2 0	Nov. 1875
30000	Bampfylde, c, i, mn., Devon*	1 0 0	1½	1⅛ 1⅜	0 2 0	0 2 0	June 1873
200	Botallack, t, c, St. Just§	116 5 0	42½	40 42½	619 15 0	5 0 0	Aug. 1872
4000	Brookwood, c, Buckfastleigh	1 16 0	4	3 4	3 16 0	0 2 0	Nov. 1875
3348	Cargoll, s-l, Newlyn§	5 18 0	1⅛	1 1⅛	4 16 3	0 12 6	Oct. 1872
6400	Cashwell, l, Cumberland*	2 10 0	—		1 7 6	0 2 0	Aug. 1875
1000	Carn Brea, c, t, Illogan†	35 0 0	43	38 40	308 0 0	1 0 0	Feb. 1874
6000	Cath. & Jane, l.* Penrhyndendraeth	5 0 0	—		0 7 6	0 7 6	June 1873
2450	Cook's Kitchen, t, Illogan†§	21 19 9	5	4½ 5	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock†*§	1 0 0	5	4½ 5	116 10 0	0 12 0	May 1872
4296	Dolcoath, c, t, Camborne	10 14 10	43	38 40	109 1 3	0 10 0	Nov. 1875
6500	Drake Walls, t, c, Calstock	6 0 0	1½	1 1⅛	0 2 0	0 2 0	July 1874
10000	East Balleswidden, t, Sancreed*	1 0 0	—		0 2 11	0 0 5	Feb. 1874
6144	East Caradon, c, St. Cleer†	2 14 6	2¾	2¾ 3	14 19 0	0 2 0	Oct. 1872
300	East Darren, l, Cardiganshire	32 0 0	30	25 30	232 10 0	1 0 0	Jan. 1876
6400	East Pool, t, c, Illogan	0 9 9	14½	14 15	14 7 3	0 4 6	Jan. 1876
1906	East Wheal Lovell, t, Wendron*‡	5 19 0	5	4 5	20 7 6	0 7 6	Oct. 1874
2800	Foxdale, l, Isle of Man*†	25 0 0	—		81 15 0	0 10 0	Sept. 1875
40000	Glasgow Cara., c* [30,000 £1 p., 10,000 15s. p.]		1¼	1 1¼	0 11 10	0 2 0	Jan. 1876
15000	Great Laxey, l, Isle of Man*	4 0 0	17½	17 18	19 3 0	0 10 0	Jan. 1876
25000	Great West Van, l, Cardigan*	2 0 0	1⅛	¾ ⅞	0 2 0	0 1 0	Aug. 1874
5908	Great Wheal Vor, t, c, Helston†§	41 2 6	2⅛	2 2⅛	15 19 6	0 2 6	June 1872
6400	Green Hurth, l, Durham*	0 6 0	3⅛	2 3	1 12 0	0 4 0	Oct. 1874
20000	Grogwinion, l, Cardigan*	2 0 0	6	5½ 6	0 5 6	0 2 6	Jan. 1876
9830	Gunnislake (Clitters'), t, c	5 5 0	3	2⅛ 3	0 8 9	0 1 6	Oct. 1875
1024	Herodsfoot, l, near Liskeard†	8 10 0	4½	4 4¼	62 5 0	0 15 0	Oct. 1872
18000	Hingston Down, c, Calstock*† (£1 sh.)	2 5 0	1⅛	1 1⅛	4 4 0	0 1 0	Nov. 1875
25000	Killaloe, sl, Tipperary	1 0 0	—		0 3 11½	0 0 6	Mar. 1873
400	Lisburne, l, Cardiganshire	18 15 0	55	50 55	571 10 0	1 0 0	Jan. 1876
5120	Lovell, t, Wendron	0 10 0	—		0 17 6	0 1 6	Jan. 1874
9000	Marke Valley, c, Caradon*	5 0 6	3¾	3¼ 3½	7 15 0	0 2 0	Jan. 1876
11000	Melindur Valley, l, Cardigan*	3 0 0	3	2 3	0 7 2	0 3 7	Jan. 1875
9000	Minera Mining Co., l, Wrexham*	5 0 0	6	4 5	64 10 2	0 5 0	Feb. 1876
20000	Mining Co. of Ireland, cl, c, l*	7 0 0	—		0 8 0	0 3 6	July 1872
512	North Busy, c, Chacewater	3 9 6	8	7 8	0 10 0	0 10 0	Dec. 1875
12000	North Hendre, l, Wales	2 10 0	5	3 4	1 2 6	0 2 6	Nov. 1875
2000	North Levant, t, c, St. Just§	12 2 0	—		4 13 0	0 12 0	Sept. 1873
27855	Old Treburgett,* s-l, ordinary shares	1 0 0	—		0 0 9	0 0 9	Feb. 1874
9258	Old Treburgett,* s-l (10 per ct. pref.)	0 10 0	⅝	½ ⅝	0 1 4½	0 0 6	July 1874
9530	Pedn-an-drea, t, Redruth§	9 17 0	—		0 5 0	0 5 0	Nov. 1871
5000	Penhalls, t, St. Agnes	3 0 0	2	1½ 2	3 13 6	0 2 0	July 1875
45793	Penstruthal, t, c, Gwennap	2 0 0	⅝	½ ⅝	0 2 8	0 0 8	Nov. 1875
6000	Phœnix, t, c, Linkinhorne§	4 13 4	—		39 19 10	0 4 0	Nov. 1872
18000	Prince Patrick,* s-l, Holywell	1 0 0	3	2 2½	0 14 0	0 1 3	Jan. 1876
1120	Providence, t, Lelant†§	16 16 7	3⅛	2 2½	104 12 6	0 10 0	Sept. 1872
12000	Roman Gravels, l, Salop*	7 10 0	15	14 14½	5 16 0	0 8 6	Feb. 1876
512	South Caradon, c, St. Cleer	1 5 0	120	100 125	724 0 0	2 0 0	Nov. 1875
5000	South Carn Brea, c, t, Illogan§	2 17 0	1½	1 1½	0 10 0	0 2 6	July 1872
6123	South Condurrow, t, c, Camborne‡	6 5 6	5¼	4¾ 5¼	1 12 6	0 5 0	Oct. 1875
6000	South Darren, l, Cardigan*	3 6 6	—		1 1 6	0 1 6	Nov. 1870
10000	So. Pr. Patrick,* s-l. (8000 sh. issued)	1 0 0	—		0 7 0	0 1 0	Oct. 1875
12000	Tankerville, l, Salop*	6 0 0	12¾	12¼ 12¾	4 2 0	0 5 0	Feb. 1876
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	23	18 20	48 18 6	0 5 0	Nov. 1875
4000	Trumpet Consols, t, Helston§	8 10 0	—		9 11 0	0 10 0	Nov. 1872
12000	Tyllwyd,* s-l, Cardigan	1 0 0	⅞	⅞ 1	0 1 0	0 1 0	Nov. 1875
15000	Van, l, Llanidloes*	4 5 0	38	36½ 37½	16 13 6	0 15 0	Dec. 1875
3000	W. Chiverton, l, Perranzabuloe†	12 10 0	18	17 18	53 10 0	0 12 6	Dec. 1875
1783	West Poldice, St. Day	10 0 0	6	5 6	1 14 0	0 4 0	Feb. 1876
512	West Tolgus, c, Redruth	95 10 0	65	55 60	11 0 0	1 5 0	Dec. 1875
2048	West Wheal Frances, t, Illogan	27 3 9	9	8½ 9	3 12 6	0 5 0	Oct. 1872
512	Wheal Basset, c, Illogan†	7 2 6	30	24 26	638 10 0	1 10 0	Aug. 1872
2048	Wheal Jane, t, Kea	2 13 10	3½	2½ 3	8 5 0	0 5 0	July 1875
4295	Wheal Kitty, t, St. Agnes	5 4 6	3¼	2¾ 3¼	11 19 6	0 2 6	Dec. 1874
80	Wheal Owles, t, St. Just§	86 5 0	140	120 140	522 10 0	4 0 0	Aug. 1872
6000	Wheal Prussia, t, Redruth	2 0 0	2½	3¾ 4	0 3 0	0 2 0	Dec. 1875
25000	Wicklow, c, sul, i, Wicklow	2 10 0	—		52 9 0	0 2 6	Mar. 1872
10000	Wye Valley, l, Montgomery*	3 0 0	8	7 8	0 6 0	0 3 0	Aug. 1875

FOREIGN DIVIDEND MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
35500	Alamillos, l, Spain*†	2 0 0	2¼	1¾ 2¼	1 9 9	0 2 0	Sept. 1875
30000	Almada and Tirito Consol., s*†	1 0 0	¾	½ ¾	0 5 3	0 1 0	Mar. 1875
20000	Australian, c, South Australia†	7 7 6	2½	2 2½	0 15 6	0 2 0	July 1875
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	1½	1 1½	0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, g, California*	4 0 0	2½	2 2½	0 14 0	0 2 6	June 1874
6000	Bensberg, l, Germany*	10 0 0	3½	3 3½	0 17 4	0 8 0	July 1873
12320	Burra Burra,* c, So. Australia	5 0 0	—		56 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining,*† So. Africa	7 0 0	40	38 39	22 15 0	1 0 0	Dec. 1875
40000	Cedar Creek, g, California*	5 0 0	1⅛	⅞ 1⅛	0 5 0	0 2 6	June 1873
30000	Central American Association*†	0 16 6	—		0 6 0	0 1 0	July 1869
15000	Chicago, s, Utah*	10 0 0	6½	6 6½	1 16 0	0 4 0	Feb. 1876
21000	Colorado Terrible, s-l, Colorado*†	5 0 0	1¾	1½ 2¼	0 13 6	0 4 0	Jan. 1875
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	3¾	3½ 3¾	7 8 5	0 2 6	Jan. 1876
1?000	Don Pedro North del Rey*†	0 16 0	⅜	⅛ ⅜	2 5 9	0 2 0	Mar. 1872
23500	Eberhardt and Aurora, s, Nevada*†	10 0 0	8⅞	8⅝ 8⅞	1 0 0	1 0 0	July 1871
50000	Emma,* g, s, Utah	20 0 0	3	2¼ 2¾	3 12 0	0 6 0	Dec. 1872
70000	English and Australian, c† S. Aust.	2 10 0	2⅛	1⅞ 2⅛	2 12 9	0 2 6	Mar. 1875
15000	Ferguson, g, California*	2 0 0	—		0 3 0	0 3 0	April 1872
30000	Flagstaff, s, Utah*	10 0 0	1½	1 1½	4 2 0	0 5 0	July 1873
25000	Fortuna, l, Spain*†	2 0 0	5¾	5¼ 5¾	5 0 10	0 6 6	Sept. 1875
30000	Gold Run, hyd.	1 0 0	1	⅞ 1	0 2 4	0 0 4	Oct. 1872
68000	Kapunda Mining Co. Australia†	1 3 0	⅛	⅛ ¼	0 2 4	0 0 6	June 1873
20000	Last Chance, s,* Utah	5 0 0	1⅛	⅝ ⅞	0 14 0	0 2 0	July 1873
15000	Linares, l, Spain*†	3 0 0	4¾	4½ 5	15 4 2	0 5 0	Sept. 1875
65000	London and California, g*†	2 0 0	½	¼ ½	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 shares)	3 10 0	1	¾ 1	1 11 6	0 1 6	Mar. 1873
5000	Mammoth Copperopolis of Utah, c, s	10 0 0	—		0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, s, Utah*	10 0 0	—		0 4 0	0 4 0	Jan. 1873
18000	Prussian Mining & Ironworks, cl, i	30 0 0	—		6 0 0	3 0 0	July 1873
10000	Pontgibaud, s-l, France†	20 0 0	20	18 20	20 14 2	1 3 2	Nov. 1875
1?000	Port Phillip, g, Clunes*†	1 0 0	⅞	⅝ ⅞	1 8 0	0 1 0	Jan. 1872
54000	Richmond Consols, s, Nevada*†	5 0 0	7⅛	6⅝ 6⅞	2 14 0	0 7 6	May 1875
120000	Scottish Australian Mining Co.*†	1 0 0	1¾	1½ 1¾	12½ per cent.		Nov. 1875
60000	Scottish Austral. Mining Co., New	0 5 0	⅜	⅜ ⅝	12½ per cent.		Nov. 1875
112500	Sierra Buttes, g, California*†	2 0 0	1¾	1¼ 1¾	1 12 0	0 2 0	Oct. 1875
60000	South Aurora, s, Nevada*	5 0 0	⅜	½ ⅝	0 14 2	0 2 0	Nov. 1873
12320	S. Australian (Burra Burra), c, S. Aust.	5 0 0	—		70 0 0	5 0 0	Jan. 1865
?53000	St. John del Rey*† (£5 stock and multiples dealt in)			380 400	25 p. ct. for ½ year		Dec. 1875
15000	Sweetland Creek, g, California*†	4 0 0	3⅛	2⅞ 3⅛	3 4 0	0 2 0	Dec. 1875
2?000	Tolima, g, s* (6000 sh. are £5 f. pd.)	4 10 0	3¾	3 3¼	0 11 6	0 6 6	May 1874
15000	Western Andes, s,* New Granada	5 0 0	5¾	5 5¾	2 13 0	0 8 0	Sept. 1875

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
30000	Anglo-Australian, g, Victoria*	2 10 0	—		Sept. 1872
50000	Anguilla Phosphate, West Indies (40000 issued)	10 0	—		Fully pd.
12000	Argentine, g, Argentine Republic	5 0 0	7½	6½ 7½	Fully pd.
10000	Australian Central, g* (also 6000 deferred shares)	1 0 0	—		Fully pd.
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—		Fully pd.
30000	Blue Tent, hyd., California	5 0 0	4½	4 4½	Fully pd.
50000	Braganza, g, Brazil*†	0 15 0	—		Fully pd.
12000	Camp Floyd, s, Utah*	10 0 0	—		Oct. 1870
35000	Cesena Sulphur Company, Romanga, Italy*	10 0 0	—		Fully pd.
50152	Chontales, g, s, Nicaragua*† (and 12,542 of £1 15s.)	2 0 0	⅝	½ ¾	Fully pd.
6000	Clifton, s, Colorado*	5 0 0	—		Fully pd.
16000	Condes of Chili, s-l	5 0 0	7⅛	6½ 7	Feb. 1872
10000	Crescent, g, Plumas County, California*	10 0 0	—		Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—		Fully pd.
10000	Exchequer, g, s, California*†	1 0 0	1⅛	½ ¾	Dec. 1871
25000	Frontino and Bolivia, g, New Granada*†	2 0 0	2½	2¼ 2½	Fully pd.
40000	Holcombe Valley, g,* California	1 0 0	—		Fully pd.
6000	Hornachos,* s-l, (£10 shares) Spain	10 0 0	—		July 1873
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—		Jan. 1874
100000	I. X. L., g, s, California*	1 0 0	⅞	⅝ ¾	Fully pd.
50000	Javali, g, Nicaragua*	2 0 0	⅝	½ ⅝	Fully pd.
12000	Lanestosa,* l, z, Viscaya, Spain (£2 shares)	1 12 6	—		Fully pd.
75000	Malabar, g, Colombia* (65000 issued)	1 0 0	—		Sept. 1874
40000	Malpaso, g, Colombia* (10000 pref. shares, fully paid)	1 0 0	—		Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	—		Fully pd.
6000	Monte Loreto, g, c, Italy*	5 0 0	—		Fully pd.
18000	New Pacific, g, s, Nevada*	0 10 0	—		Fully pd.
63000	New Quebrada, c, Venezuela*	5 0 0	¼	⅛ ¼	Dec. 1874
5000	New Rosario, s, Mexico*	1 0 0	4⅛	3⅞ 4⅛	Fully pd.
3000	New Zealand Kapanga, g, Coromandel*	5 0 0	—		Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	4 0 0	1	½ 1	Fully pd.
60000	Panulcillo, c, Chili*† (£80000 debentures)	4 0 0	4¼		Sept. 1875
60000	Pestarena United, g, Italy*†	3 0 0	1⅛	1¼ 1¾	Fully pd.
50000	Rica, g, Colombia* (40000 issued)	1 0 0	¼	⅛ ¼	Fully pd.
235000	Rio Tinto,* c, Huelva, Spain	10 0 0	—		Fully pd.
100000	Rossa Grande, g, Brazil*† (£1 shares)	0 19 0	6	5 6	Fully pd.
30000	Russia, c, Orenburg and Uta*†	10 0 0	—		Fully pd.
35000	San Pedro, c, Chili*	2 0 0	3¼	2¾ 3¼	July 1872
40000	Santa Barbara,* g, Brazil	0 9 6	5¼	4 4½	Fully pd.
10000	Silver Plume, s, Colorado*	1 0 0	1⅝	1⅜ 1⅝	Fully pd.
37500	Snowdrift, s, Colorado*	2 0 0	—		Mar. 1872
30000	Tecoma, s, Utah*	10 0 0	—		Fully pd.
20000	Thornhill Reef, g, Australia*	1 0 0	1⅜	1⅛ 1⅜	Fully pd.
43174	United Mexican, s, Mexico*†‡	28 12 8	¼	⅛ ¼	Fully pd.
14000	Utah, g, s-l, Utah*	5 0 0	3¾	3 3½	May 1875
25000	Victoria (London)*, g, Australia (25,000 sh. 16s. pd.)	1 0 0	¼	⅛ ¼	Fully pd.
75000	Yorke Peninsula, c, South Australia	1 0 0	—		Fully pd.
40000	Yorke Peninsula, c, South Australia Preference	1 0 0	⅛	¼ ½	Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices.	
Argentine, 1868, 6 per cent.	79	81
Bolivia, 6 per cent.	20	22
Brazilian, 1865, 5 per cent.	96	98
Chilian, 1866, 7 per cent.	102	104
City of Providence, 5 p.c. coupon bonds	94	96
Egyptian, 1862, 7 per cent.	69	74
Do., 1868, 7 per cent.	65	66
Do., 7 per cent., V.M.L.	76	79
Do., 9 per cent. guar.	84	89
Do., 7 per cent., K.M.L.	63	64
Foreign and Col. Gov. Trust, 6 p. cent.	91	96
Do., 5 per cent., 2d issue	68	73
Do., 6 per cent., 3d issue	70	75
Do., 1872, 4th issue	70	75
Do., 1873, 5th issue	68	73
Peruvian, 1870, 6 per cent.	33½	34½
Do. 1872, 5 per cent.	26½	27
Russian, 5½ per cent. L. Mort.	89	91
Spanish, Quicksilver Mort., 5 p. cent.	86	88
United States Mort., 6 per cent.	94	95

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.
25000	Aberdaunant, l, Llanidloes*	1 0 0	1½	1¼ 1½
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	
18000	Ambrose Lake, t, c, Liskeard	1 18 6	—	
12000	Assheton, l, Carnarvonshire*	5 0 0	2	1½ 2
20000	Ballycummisk,* c, Schull	2 0 0	—	
12000	Bedford United, c, Tavistock	1 17 6	1¼	1¼ 1¾
28000	Belstone,* c, Devon (27,000 fully pd.)	1 0 0	2½	2¾ 3
15000	Blue Hills, t, c, St. Agnes	2 6 6	—	
25000	Bog, l, Shropshire*	2 0 0	⅜	⅛
2000	Bowden Hill,* mn	1 0 0	¾	½ ¾
20000	Brynambor, l, Cardigan	1 0 0	—	
30000	Burrow & Butson,* t, c, bl, St. Agnes	1 0 0	—	
4828	Bwadrain, s-l, Cardigan* (£4 shares)	3 19 0	—	
4235	Bwlch Consols, s-l, Cardigan*‡ (£5 sh.)	4 19 6	—	
30000	Caldbeck Fells, l, Cumberland*	2 0 0	—	
5584	Carn Camborne, c, t, Camborne	5 3 6	⅛	⅛ ¼
10000	Cathedral, t, c, Gwennap*	1 10 0	1¾	1¼ 1½
20000	Central Foxdale, l, Isle of Man* (£2 sh.)	1 0 0	—	
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	
24000	Court Grange, s-l, Cardiganshire	1 0 0	—	
20000	Cwm Dwyfor,* c, s-l, Carnarvonshire	1 0 0	—	
15000	Cwm Nant Ddu,* l, Montgomery	1 0 0	—	
10000	Denbighshire Consolidated, l*	3 0 0	3	2 3
656	Ding Dong, t, Gulval	50 14 6	6	3½ 4
10000	Dubby Syke, l, Durham*	0 9 0	1	⅞ 1
10000	Duchy Great Consols, c, Calstock	5 0 0	—	
15000	Dylife,* l, Montgomeryshire	6 0 0	—	
512	East Basset, c, Redruth†‡	76 15 0	2½	2 2½
803	East Black Craig,* l., Scotland	25 0 0	—	
4000	East Chiverton, l, Perranzabuloe	6 10 0	1⅜	1¼ 1⅜
6000	East Grenville, c, Camborne	7 8 6	½	¼ ½
30000	E. Nant-y-mwyn,* l, Brecknockshire	1 0 0	—	
6000	East Twarnhaile, c, St. Agnes	0 10 0	1⅛	1¼ 1⅜
15000	East Van, l, Llanidloes*	5 0 0	22	20 21
20000	Elgar,* s-l, Cardiganshire	1 0 0	1¼	1 1¼
12800	Florence and Tonkin United* l.	0 10 0	—	
5000	Frank Mills, l, Christow	4 16 0	⅝	½ ⅝
8000	Fronvellan, l, Mont.* [4000 sh. fy. pd.]	1 0 0	—	
18000	Furze Hill, t, Tavis.*	1 0 0	—	
3950	Gawton, c, Tavistock	4 1 6	½	¼ ½
12500	Gilfach, s-l, Llangadock	2 0 0	—	
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	1¼ 1¼
10000	Glan Severn, s-l, Flintshire	1 0 0	—	
10000	Glyn,* l, Llanidloes	2 0 0	2⅛	2¼ 2½
15000	Gobbett, t, Dartmoor	1 0 0	—	
12000	Goginan, and Level Newydd, Card., l	2 10 0	—	
100000	Gold, g, Merionethshire	1 0 0	¼	⅛ ¼
7500	Gorsedd and Merllyn Cons., , Flint	2 10 0	3	2 3
20000	Gt. E. Foxdale,* l, I. of Man (£1 sh.)	0 14 0	—	
9500	Great Pant-y-Pydew, l, Holywell	2 0 0	—	
18000	Grosvenor, l, Holywell (£1 sh.)	0 7 0	—	
10000	Harehope Gill,* l, Durham (£1 sh.)	0 2 6	1⅛	1 1⅛
6400	Harwood,* l, Durham	0 15 0	1	¾ 1
6000	Keswick United, l*	5 0 0	—	
8000	Killifreth, t, Chacewater	1 5 0	⅜	⅝ ¾
25000	Kingston Consols, s-l, Cornwall	1 0 0	1	⅞ 1
12000	Ladywell,* l, Salop	2 10 0	2¾	2½ 2¾
2500	Levant, c, t, St. Just	9 1 6	—	
64	Llandilo, s-l, bl, Flintshire	50 0 0	—	
14000	Llanidloes, l, Montgomery*	3 0 0	3½	3¼ 3¾
15000	Llanlivery Cons., t, c, ars, Llanlivery	1 0 0	—	
25000	Llanrhaiadr, l, Montgomery* (£2 sh.)	1 10 0	—	1¼
30000	Llanrwst, l, Carnarvon	2 0 0	2½	2¼ 2½
6000	Medlyn Moor, t, Wendron	1 4 10	—	
8000	Mellanear, c, Hayle*	4 0 0	—	
13000	Monydd Gorddu, l, Cardigan*	5 0 0	4½	3½ 4
4000	Nanty, l, Montgomeryshire*	1 0 0	—	
20000	Nanty Moch, s-l, Llanbadarnfawr	1 0 0	—	
2000	Nant-y-Ricket,* c, l, Montgom.	5 0 0	—	
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	
10000	New Beldon, l, Northumberland*	1 0 0	—	
12000	New Caroline, c, Perranuthnoe	1 0 0	—	
3000	New Chiverton,* l, Perranzabuloe	6 0 0	6¾	6¼ 6¾
20000	New Consols, c, Tavistock*	3 0 0	1⅞	1⅜ 1⅞
8000	New Crickheath,* l, Shropshire	2 0 0	—	
8000	New Dolcoath, t, c, Camborne*	3 0 0	1⅛	1 1⅛
16000	New Fowey Consols, t, St. Blazey*	3 0 0	2	1½ 2
2000	New Hendra, t, Breage	2 9 0	1¼	1 1¼
10000	New North Pool,* c, Illogan	3 0 0	3	2 3
6400	New Pembroke, t, c, Par Station	5 4 6	1	¾ 1
5000	New Rosewarne, c, Gwinear	5 12 0	⅞	¾ 1
3200	New South Merllyn, l, Flint*	2 10 0	—	
17000	North Laxey,* Isle of Man	2 0 0	2	1⅜ 1⅝
20000	North Prince Patrick,* l, Holywell	1 0 0	1¾	1 1¼
2000	North Wheal Towan, t, c, Illogan	1 19 6	—	
1000	North Rosewarne, c, Gwinear	6 12 6	—	
8000	North Treleigh Wood, t, Redruth*	1 0 0	1¼	1 1¼
5936	North Treskerby, c, St. Agnes	3 15 4	—	
6000	Old Talargoch, l, Flintshire*	2 0 0	—	
2500	Old Tincroft, c, t, Lelant*	4 0 0	4⅛	4¼ 4⅜
16923	Parys Mountain,* c, Anglesea	3 0 0	1¼	1 1⅛
4000	Pateley Bridge, l, Yorkshire	5 0 0	8	6 6½
6000	Pennant, l, bar, North Wales*	5 0 0	5½	5 5½
12000	Pennerley, l, Shropshire*	3 0 0	1⅛	1⅛ 1⅜
12000	Plynlimmon, l, Llanidloes*	2 5 0	1⅛	⅝ ¾
648	Polrose, t, Breage	21 0 0	—	
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	1¾	1¼ 1¾
2000	Prideaux Wood, t, Llanivery	5 0 0	—	
12800	Prince of Wales, c, Calstock‡	1 7 6	¼	⅛ ¼
6000	Relistian Consols, c, Gwinear	0 10 0	⅞	⅝ ¾
15000	Rookhope Valley, l, Durham*	1 10 0	1¾	1⅛ 1⅜
5869	Rosewall Hill and Ransom, t	4 17 6	⅜	¼ ⅜
6000	Rosewarne United, c, t, Gwinear	1 10 0	—	
3000	Russell, s-l, Swymbridge	0 6 0	—	
5000	Silvercross,* c, t, Marazion	1 0 0	1¼	1⅛ 1¼
4200	Snowbrook, s-l, Montgomery	5 0 0	5	4½ 5
12000	South Bwadrain, s-l, Llanbadarnfawr	0 10 0	—	
6000	South Cwmystwith, l, Cardiganshire	0 10 0	2⅛	1½ 2
512	South Dolcoath, c, t, Redruth	12 5 0	1⅛	1 1⅛
5000	South Great Work, t, St. Hilary	2 14 0	—	
12000	South Lisburne, l, bl, Cardigan*	0 12 6	—	
18000	So. Rom. Gravels, l,* £5000 deb. 15p.c.	1 10 0	⅝	⅜ ⅝
6000	South Roskear, t, c, Camborne	6 10 0	5	4 5
6000	South Tolcarne, t, c, Camborne	1 9 0	¾	½ ¾
12000	South Van,* l, Montgomeryshire	1 0 0	—	
3000	South Ward, l, Beerferris	5 8 0	1⅛	⅞ 1⅛
937	South Wheal Crofty, c, Illogan	35 10 10	17	15 17
450	South Wh. Frances, c, Illogan†	61 3 9	10	8 10
432	Spearn Moor, t, Penzance‡	45 17 9	—	
4000	St. Agnes Consols, t*	5 0 0	5⅜	5⅛ 5⅜
14000	St. Blazey t.* (£2 10s. shares)	2 0 0	—	
10000	St. David's,* s-l, Holywell	1 0 0	—	
6000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1⅜	1⅛ 1⅜
6000	Success, &c., l, Derb. (12,000l. called)	1 0 0	—	
16000	Sunnyside,* l, Durham	2 0 0	3	2½ 3
30000	Talybont,* s-l, Talybont	1 0 0	1	⅞ 1
6400	Teesdale,* l, Durham	0 18 0	1⅛	1⅛ 1⅜
14000	Teign Valley, l, bar., Bridford	1 0 0	—	
12000	Trebeigh Consols, s-l, St. Ive	0 3 0	½	⅜ ½
5000	Treleigh Wood, t, Redruth	5 11 0	7½	5 7½
547	Trelyon Consols	15 0 0	⅜	¼ ⅜
12000	Trethellan, s-l, Crantock*	2 0 0	—	
7500	Tresellyn, t, Altarnun	2 10 0	—	
6000	Unity Wood, t, c, Kenwyn	3 5 0	1⅛	1⅛ 1⅜
20000	Van Consols, l, Llanidloes*	2 10 0	3	2½ 3
1000	Vaughan, s-l, Cardigan	10 0 0	—	
12000	West Assheton, l, Carnarvon	1 0 0	2¼	2 2¼
6000	West Basset, c, Illogan†‡	5 6 8	5⅛	4¾ 5
20000	West Bryn Celyn,* l, Flintshire	1 0 0	—	
3000	West Craven Moor, l, Pateley Bridge	10 0 0	11½	10¾ 11½
12000	W. Esgair Lle, l, Card.*	2 0 0	⅜	½ ⅝
5000	West Godolphin, t, c, Breage	1 13 6	2⅛	2 2½
12000	West Goginan,* Cardiganshire	2 0 0	2⅛	2 2½
15000	West Great Work, t, Breage*	1 0 0	1	¾ 1
10000	West Llangynog, s-l, Montgomery	2 0 0	—	
12000	West Maria & Fortescue, t, c, Lamer.	4 12 6	⅜	¼ ⅜
3000	West Mary Ann, l, Menheniot	0 3 6	⅜	⅛ ⅜
50000	West Milwr, s-l, Flint	1 0 0	—	
12000	West Pant-y-Go, s-l, Flint*	1 0 0	—	
4000	West Pateley Bridge, l, Yorkshire	5 0 0	6	5½ 6
3000	West Phœnix, t, Linkinhorne	0 18 0	—	
1403	West Polbreen, t, St. Agnes	3 5 0	—	
10000	West Roskear, t, s-l, bl, c, Camborne	0 12 0	3	2½ 3
12000	West Tankerville, l, Salop*	3 0 0	2½	2 2½
6000	West Wheal Gorland, t, c	4 0 0	—	
3000	West Wheal Peevor, t, Redruth	0 10 0	—	
292	West Wheal Seton, c, Camborne†	63 15 0	40	35 40
12000	West Wye Valley, l, Montgomery	3 0 0	4½	4¼ 4¾
6000	Wheal Agar, c, Illogan	11 0 0	3½	3 3½
6000	Wheal Argus, t, Sancreed	0 10 0	—	
2500	Wheal Arthur, t, c, Calstock	1 0 0	—	
741	Wheal Basset and Grylls, t	9 18 6	—	
6000	Wheal Coates, t, St. Agnes	3 0 0	—	
6000	Wheal Crebor, c, Tavistock	4 1 0	2⅛	2¼ 2⅜
8400	Wheal Emma, t, c, Buckfastleigh	1 10 0	—	
5179	Wheal Grenville, c, Camborne*	11 1 6	2⅛	2 2½
12000	Wh. Mary Hutchings,* t, Plympton	1 14 0	—	
3000	Wheal Peevor, t, Redruth	6 1 0	2⅛	2 2⅛
10000	Wheal Ruby, t, Ludgvan	1 0 0	—	
1000	Wheal Speedwell, t, c, Breage	1 0 0	—	
4096	Wheal Uny, t, c, Redruth	13 0 6	2	1¾ 2
6000	Wheal Vincent, t, Alternun	1 11 0	—	
2000	Willoughby, l, Llanrwst	3 10 0	—	

IRON AND COAL COMPANIES.

Shares.	Company.	Paid.
£100	Abbot, John, and Co. [L.]	£75 0 0
15	Albion Steel and Wire Co. [L.]	12 10 0
5	Alltami Colliery Co. [L.]	5 0 0
100	Ashbury Co. [L.]	90 0 0
10	Bagnall, John, and Sons [L.]	10 0 0
10	Benhar Coal Co. [L.]	10 0 0
50	Bilbao Iron Ore Co. [L.]	50 0 0
10	Bilson & Crump Meadow Coll. Co. [L.]	10 0 0
4	Blaen Cwmbach Coal Co. [L.]	4 0 0
50	Blaenavon Iron and Steel Co. [L.]	50 0 0
100	Bolckow, Vaughan, and Co. [L.]...A	35 0 0
50	Bowling Iron Co. [L.]	50 0 0
50	Britannia Ironworks [L.]	25 0 0
50	Brown, Bailey, and Dixon [L.]	40 0 0
100	Brown, John, and Co. [L.]	70 0 0
5	Cakemore Colliery Co. [L.]	5 0 0
100	Cammell and Co. [L.]	80 0 0
20	Cannock and Huntington Coal [L.]	2 0 0
10	Cardiff & Swansea St. Coal Co. [L.]	8 0 0
10	Cardigan Steel and Wire Co. [L.]	7 10 0
10	Central Swedish Iron and Steel [L.]	10 0 0
5	Chapel House Colliery	5 0 0
50	Charlton Iron Co. [L.]	40 0 0
50	Chatterley Iron Co. [L.]	40 0 0
10	Chillington Iron Co. [L.]	10 0 0
1	Clee Hill Colliery Co. [L.]	1 0 0
10	Consett Iron Co. [L.]	7 10 0
1	Consett Spanish Ore [L.]	1 0 0
50	Cooke, William, and Co. [L.]	30 0 0
20	Darlington Iron Co. [L.]	1 0 0
50	Davy Brothers [L.]	22 10 0
5	Diamond Fuel Co. [L.]	4 10 0
32	Ebbw Vale Co. [L.]	29 0 0
10	General Mining Ass. [L.] (£1 returned)	9 0 0
20	Great Western Coal Co. [L.]	17 0 0
2	Gwyngwillim Colliery Co. [L.]	2 0 0
15	Hopkins, Gilkes, and Co. [L.]	10 0 0
10	Ifton Rhyn Colliery Co. [L.]	10 0 0
50	Knowles, Andrew, and Sons [L.]	17 0 0
10	Llay Hall Coal, Iron, & Firebrick [L.]	10 0 0
5	Littledean Woodside Coll. Co. [L.]	5 0 0
50	Llynvi, Ogmore, & Tondu Co. [L.]	50 0 0
10	Lydney and Wigpool Iron Ore [L.]	7 5 0
10	Marbella Iron Ore Co. [L.]	10 0 0
6	Mersey Steel and Iron Co. [L.]	5 0 0
10	Midland Iron Co. [L.]	5 0 0
5	Mold Argoed Colliery Co. [L.]	5 0 0
10	Monkland Iron and Coal Co. [L.]	10 0 0
4	Mwyndy Iron Ore [L.]	3 10 0
100	Nant-y-Glo and Blaina (8 p.c. pref.)	100 0 0
1	Nerbudda Coal and Iron	0 8 0
20	New Sharlston Collieries [L.] Pref.	20 0 0
10	Newport Abercarn Coal Co. [L.]	8 0 0
10	Northmptn. Coal, Iron & Wagon [L.]	8 0 0
10	Northfield Iron Co. [L.]	8 0 0
1	Norton Green Coal Co. [L.]	1 0 0
35	Palmer's Shipbuilding and Iron [L.]	25 0 0
100	Parkgate Iron Co. [L.]	65 0 0
20	Patent Nut and Bolt Co. [L.]	14 0 0
20	Patent Shaft and Axletree [L.]	10 0 0
20	Pelsall Coal and Iron [L.]	15 0 0
50	Phœnix Bessemer Co. [L.]	40 0 0
50	Rhymney Iron Co. [L.]	50 0 0
100	Samuel Fox and Co. [L.]	80 0 0
100	Sandwell Park Colliery Co. [L.]	100 0 0
50	Ditto New	10 0 0
50	Shotts Iron Co. [L.]	50 0 0
100	Sheepbridge Iron and Coal [L.]	55 0 0
50	Silkstone & Dodworth Cl. & Iron [L.]	22 0 0
5	Silkstone Fall Colliery Co. [L.]	5 0 0
20	Skerne Ironworks [L.]	20 0 0
50	Somorrostro Iron Co. [L.]	50 0 0
20	South Wales Coal Co. [L.]	17 0 0
100	Staveley Iron and Coal Co. [L.]	60 0 0
100	Ditto ditto New	10 0 0
20	South Cleveland Ironworks [L.]	20 0 0
10	Swansea Valley Steam Coll. Co. [L.]	6 0 0
100	Thames Iron Company	100 0 0
50	Tredegar Iron and Coal Co. [L.]	12 0 0
25	Ditto B. shares	25 0 0
20	Ulverston Mining Co. [L.]	12 0 0
1	United Bituminous Collieries [L.]	1 0 0
10	Vancouver Coal [L.]	6 0 0
100	Vickers, Sons, and Co. [L.]	100 0 0
50	Welsh Ironworks Co. [L.]	50 0 0
25	W. Cumberland I. and Steel [L.]	20 0 0
10	West Mostyn Coal [L.] (12 p.c. pref.)	5 0 0
5	West Swansea Colliery Co. [L.]	5 0 0
10	Whitehaven Iron Co. [L.]	10 0 0
100	Wigan and Whiston Coal Co. [L.]	70 0 0
100	Wigan Coal and Iron Co. [L.]	75 0 0

WAGON COMPANIES.

10	Birmingham Wagon Co. [L.]	10 0 0
20	British Wagon Co. [L.]	10 0 0
20	Sheffield Wagon Co. [L.]	15 0 0
10	Yorkshire Wagon Co. [L.]	10 0 0

TELEGRAPH COMPANIES.

"St."	Anglo-American	100 0 0
10	Brazilian Submarine	10 0 0
20	Direct United States Cable	20 0 0
10	Eastern	10 0 0
10	East. Exten., Australia and China	10 0 0
10	Great Northern	10 0 0
25	Indo-European	25 0 0
10	Mediterranean Extension	10 0 0
8	Reuters	8 0 0
Stk.	Submarine	100 0 0
10	West India and Panama	10 0 0
20	Western and Brazilian	20 0 0
$1000	Western Union, 7 per cent. Mort. Bonds	$1000 ...107

MISCELLANEOUS.

Stk.	Atlantic and Great Western Leased Lines, Rental Trust	100 0 0
2	Austral. Mort. Land and Finance [L.]	5 0 0
25	Australian Agricultural	21 10 0
10	Avonside Engine [L.]	7 0 0
Stk.	Baltimore and Ohio, 6 per cent.	100 0 0
Stk.	Cent. of New Jersey Con. Mort.	100 0 0
Stk.	Cent. Pacific of Calif., 1st Mort. 6 p.c.	100 0 0
25	City of London Real Property [L.]	12 0 0
25	Copper Miners of Eng. (7 p. c. pref.)	25 0 0
5	Credit Foncier of England [L.]	5 0 0
	Ditto New	5 0 0
5	Diamond Rock Boring	4 10 0
15	English and Foreign Credit	8 0 0
15	Foster, Porter, and Co. [L.]	10 10 0
5	Gen. Phos. & Chem. Works Co. [L.]	5 0 0
1	Glaisdale Whinstone Quarry	1 0 0
17	Hudson's Bay Company	17 0 0
10	Huntington Copper and Sul. Co.	9 0 0
Stk.	Illinois Central, $100 shares	100 0 0
Stk.	Illinois & St. Louis Bridge, 1st Mort.	100 0 0
Stk.	Ditto, 2nd Mort., 7 per cent.	100 0 0
Stk.	Illinois Cent. Sinking Fund, 5 p. cent.	100 0 0
Stk.	Ditto, 6 per cent.	100 0 0
7½	Imperial Credit [L.]	7 10 0
—	Ditto, Surplus Certificate	—
Stk.	Lehigh Val. Con. Mort., A, 6. p. cent.	100 0 0
10	Milner's Safe [L.]	10 0 0
25	National Discount [L.]	5 0 0
Stk.	N. Cent. Rail. Con. Mort., 6 per cent.	10 0 0
5	Patent Gunpowder Company	5 0 0
Stk.	Pennsyl. Gen. Mort. 6 p. cent., 1910.	100 0 0
Stk.	Ditto, Con. Sink. Fund, 6 p. ct., 1905	100 0 0
50	Peninsular and Oriental Steam	50 0 0
10	Silber Light (ord. sh.)	10 0 0
20	Suez Canal shares	20 0 0
12	Telegraph Construc. & Mainte. [L.]	12 0 0
5	Ditto, Second Bonus Three per Cents	5 0 0
10	Tharsis Sulphur and Copper Co.	10 0 0
Stk.	Union Pacific Land Grant, 1st Mort.	100 0 0
Stk.	Union Pacific Railway, 1st Mort.	100 0 0

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; s-l, silver-lead; t, tin; z, zinc.
* Limited Liability Companies; † quoted on the Stock Exchange; ‡ have paid dividends.

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